

206

Letting June 17, 2022

Notice to Bidders, Specifications and Proposal



**Contract No. 66957
KANKAKEE County
Section 140 N
Route FAP 840
Project NHPP-STP-FWZL(086)
District 3 Construction Funds**

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)



- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. June 17, 2022 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. 66957
KANKAKEE County
Section 140 N
Project NHPP-STP-FWZL(086)
Route FAP 840
District 3 Construction Funds**

Widening and resurfacing of the intersection with Armour Road. Other items include storm sewer, shared use path, sidewalk, curb and gutter, roadway lighting, traffic signals, and landscape restoration. (0.72 miles)

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to re-advertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

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:

<u>CHECK SHEET #</u>		<u>PAGE NO.</u>
1	X Additional State Requirements for Federal-Aid Construction Contracts	1
2	X Subletting of Contracts (Federal-Aid Contracts)	4
3	X EEO	5
4	Specific EEO Responsibilities Non Federal-Aid Contracts	15
5	Required Provisions - State Contracts	20
6	Asbestos Bearing Pad Removal	26
7	Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal	27
8	Temporary Stream Crossings and In-Stream Work Pads	28
9	X Construction Layout Stakes	29
10	Use of Geotextile Fabric for Railroad Crossing	32
11	Subsealing of Concrete Pavements	34
12	Hot-Mix Asphalt Surface Correction	38
13	Pavement and Shoulder Resurfacing	40
14	Patching with Hot-Mix Asphalt Overlay Removal	41
15	Polymer Concrete	43
16	PVC Pipeliner	45
17	Bicycle Racks	46
18	Temporary Portable Bridge Traffic Signals	48
19	X Nighttime Inspection of Roadway Lighting	50
20	English Substitution of Metric Bolts	51
21	Calcium Chloride Accelerator for Portland Cement Concrete	52
22	Quality Control of Concrete Mixtures at the Plant	53
23	X Quality Control/Quality Assurance of Concrete Mixtures	61
24	Digital Terrain Modeling for Earthwork Calculations	77
25	Preventive Maintenance – Bituminous Surface Treatment (A-1)	79
26	Temporary Raised Pavement Markers	85
27	Restoring Bridge Approach Pavements Using High-Density Foam	86
28	Portland Cement Concrete Inlay or Overlay	89
29	Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	93
30	Longitudinal Joint and Crack Patching	96
31	Concrete Mix Design – Department Provided	98
32	X Station Numbers in Pavements or Overlays	99

TABLE OF CONTENTS

LOCATION OF PROJECT	1
DESCRIPTION OF PROJECT	1
MAINTENANCE OF TRAFFIC AND KEEPING ROADS OPEN TO TRAFFIC.....	2
TRAFFIC CONTROL AND INSPECTION (SPECIAL)	2
CHANGEABLE MESSAGE SIGN	3
TRAFFIC CONTROL SURVEILLANCE	3
PLASTIC DRUMS.....	3
TEMPORARY PATCHES FOR STAGE CONSTRUCTION.....	3
STATUS OF UTILITIES TO BE ADJUSTED	4
UTILITY RELOCATIONS AND DELAYED START DATE	8
COOPERATION BETWEEN CONTRACTORS.....	8
PAVEMENT PATCHING.....	8
VIBRATORY ROLLER RESTRICTION.....	11
HOT-MIX ASPHALT SURFACE REMOVAL, 3"	11
HOT-MIX ASPHALT SURFACE REMOVAL (SPECIAL).....	11
HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	12
COLD MILLING EXISTING MEDIAN	12
HMA SURFACE REMOVAL FOR SUBSEQUENT RESURFACING	12
STORM SEWER (WATER MAIN REQUIREMENTS).....	13
TEMPORARY DRAINAGE INTO PROPOSED DRAINAGE STRUCTURES.....	13
STORM SEWER AND SANITARY SEWER REMOVAL.....	14
STORM SEWER OR CULVERT TO BE FILLED.....	14
REMOVAL OF EXISTING STRUCTURES.....	15
BACKFILL FOR STORM SEWERS AND PIPE CULVERTS	15
FRAMES AND LIDS TO BE ADJUSTED (SPECIAL) AND WATER VALVES TO BE ADJUSTED, SPECIAL.....	15
MANHOLES TO BE ADJUSTED (SPECIAL)	16
FILLING EXISTING BOX CULVERTS	16
FENCE REMOVAL	17
COMBINATION CONCRETE CURB AND GUTTER, (ABUTTING EXISTING PAVEMENT).....	17
COMBINATION CONCRETE CURB AND GUTTER.....	17
TEMPORARY STORM SEWER	18

FLARED END SECTION REMOVAL	18
LANDSCAPING RESTORATION.....	19
CONCRETE MEDIAN, TYPE SM (SPECIAL)	19
CONCRETE MEDIAN, TYPE SB (DOWELLED).....	19
PRECAST CONCRETE BOX CULVERT 10' X 5'	20
PRECAST CONCRETE BOX CULVERT 8' X 4'	21
SANITARY MANHOLES TO BE RECONSTRUCTED.....	22
SANITARY MANHOLES TO BE REMOVED.....	22
SANITARY MANHOLES TO BE ADJUSTED	22
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL.....	22
FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL.....	25
REMOTE-CONTROLLED VIDEO SYSTEM.....	27
UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	29
TEMPORARY TRAFFIC SIGNAL TIMING	29
SIGNAL TIMING	30
VIDEO VEHICLE DETECTION SYSTEM.....	30
DOUBLE HANDHOLE OR HANDHOLE, PORTLAND CEMENT CONCRETE.....	40
SERVICE INSTALLATION, GROUND MOUNTED	41
MODIFYING EXISTING CONTROLLER AND CABINET	42
OPTIMIZE TRAFFIC SIGNAL SYSTEM.....	43
FIBER OPTIC CABLE IN CONDUIT	46
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC, SPECIAL.....	46
PEDESTRIAN PUSH-BUTTON	47
PEDESTRIAN SIGNAL HEAD AND SIGNAL HEAD, POLYCARBONATE, LED, 1 FACE, MAST ARM OR BRACKET MOUNTED, 3-SECTION OR 5-SECTION OR PEDESTRIAN SIGNAL HEADS	47
REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE.....	47
SIGN REMOVAL.....	48
DETECTOR LOOP, TYPE I	48
TEMPORARY TRAFFIC SIGNAL INSTALLATION	48
HANDHOLE TO BE ADJUSTED.....	49
COMBINATION LIGHTING CONTROLLER.....	49
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.....	50
EMERGENCY VEHICLE PRIORITY SYSTEM.....	50

LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET50
 REMOVAL OF LIGHTING LUMINAIRE, NO SALVAGE.....51
 TEMPORARY LIGHTING SYSTEM.....51
 REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES52
 ACCESSIBLE PEDESTRIAN SIGNALS (APS) (BDE).....53
 BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE).....55
 BLENDED FINELY DIVIDED MINERALS (BDE).....56
 COMPENSABLE DELAY COSTS (BDE)56
 CONCRETE BOX CULVERTS WITH SKEWS > 30 DEGREES AND DESIGN FILLS ≤ 5 FEET
 (BDE).....60
 CONCRETE END SECTIONS FOR PIPE CULVERTS (BDE)82
 DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)84
 FUEL COST ADJUSTMENT (BDE)92
 HOT-MIX ASPHALT – PATCHING (BDE).....94
 HOT-MIX ASPHALT – START OF PRODUCTION (BDE).....94
 LUMINAIRES, LED (BDE)95
 MATERIAL TRANSFER DEVICE (BDE)102
 PORTLAND CEMENT CONCRETE – HAUL TIME (BDE)104
 STEEL COST ADJUSTMENT (BDE)105
 SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)107
 SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE).....108
 SURFACE TESTING OF PAVEMENTS – IRI (BDE).....108
 TRAINING SPECIAL PROVISIONS (BDE)113
 IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION.116
 WEEKLY DBE TRUCKING REPORTS (BDE).....118
 WORK ZONE TRAFFIC CONTROL DEVICES (BDE).....118
 WORKING DAYS (BDE).....120
 PROJECT LABOR AGREEMENT121
 SWPPP.....140

STATE OF ILLINOIS

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 840 (IL 50), Project NHPP-STP-FWZL(086), Section 140N, Kankakee County Contract No. 66957 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project is located at the intersection of IL 50 (Kinzie Avenue) with Armour Road in the Village of Bradley. The improvements on Armour Road extend approximately 1,000 feet east of Kinzie Avenue to Kinneman Drive and extend west of Kinzie Avenue approximately 1,100 feet. The improvements on Kinzie Avenue extend approximately 900 feet north of Armour Road and extend south of Armour Road approximately 500 feet.

DESCRIPTION OF PROJECT

The project consists of the widening and Hot-Mix Asphalt (HMA) resurfacing of the intersection of Kinzie Avenue with Armour Road to provide additional lanes. The improvement consists of HMA surface removal, HMA base course widening, HMA surface and binder courses, Portland Cement Concrete (PCC) curb and gutter, PCC concrete medians, PCC concrete sidewalk, HMA multi-use paths, storm sewer, precast box culverts, drainage structures, pavement markings, erosion control, and all other items shown in the contract documents. The improvements will also include replacement of the traffic signals at the intersection of Kinzie Avenue with Armour Road and the intersection of Armour Road with Locke Drive. Traffic signals will also be constructed at the intersection of Armour Road with Arthur Burch Drive.

MAINTENANCE OF TRAFFIC AND KEEPING ROADS OPEN TO TRAFFIC

The Maintenance of Traffic plans in this contract have been developed with careful consideration to the Departments policies on work zone safety and mobility. The high volume of traffic, significant profile changes of the mainline pavement and drainage work on the project all require special attention in maintaining a safe work environment and to keep traffic moving as efficiently and safely as possible. The resulting Maintenance of Traffic plans requires multiple stages of proposed work.

The Contractor's attention is brought to the detailed staging plans and notes which will require work during off peak hours (8:00pm to 6:00am) for several stages and conditions, as well as set requirements for drop off conditions and set a minimum number of lanes to be open at all times.

In addition to the requirements noted in the Maintenance of Traffic plans, the resurfacing of Armour Road and IL 50 in stages 5 and 7 must be done during the off-peak hours of 8:00pm to 6:00am.

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

Any significant changes to the proposed Maintenance of Traffic plans must address the proposed lane restrictions, off-peak hour requirements, and drop off criteria, and be submitted in writing and approved by the Engineer. No additional compensation will be allowed for changes to the proposed maintenance of traffic.

TRAFFIC CONTROL AND INSPECTION (SPECIAL)

This work shall consist of furnishing, installing, maintaining, replacing, relocating, and removing all traffic control devices and signs used for the purpose of regulating, warning, or directing traffic during the construction or maintenance of the improvements.

Traffic Control and Protection, (Special) shall be provided as called for in the plans, the Special Provisions, applicable Highway Standards, applicable sections of the Standard Specifications, and as directed by the Engineer.

Traffic control devices will include signs and their supports, barricades with sandbags, channelizing devices, warning lights, arrow boards, flaggers, and any other device used for the purpose of regulating, detouring, warning, or guiding traffic through or around the construction zone.

All traffic control and protection items described and listed in the Traffic Control Plan included and referenced herein will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Portable changeable message signs will be paid for separately at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN.

Nighttime work zone lighting shall be provided according to Section 702 and will be paid for separately at the contract lump sum price for NIGHTTIME WORK ZONE LIGHTING.

The placement and removal of the temporary pavement markings that are detailed on the Maintenance of Traffic plan details will be paid for separately according to Articles 703.07 and 783.06 of the Standard Specifications.

CHANGEABLE MESSAGE SIGN

(Effective December 1, 1999; Revised August 7, 2008)

In addition to any changeable message signs shown in the traffic control standards, the Contractor shall furnish four (4) Changeable Message Signs for this project. The signs shall be operational two weeks prior to any lane closure and shall be located as directed by the Engineer. Any relocation of the signs directed by the Engineer during construction will not be paid for separately, but shall be included in the cost of the Changeable Message Sign.

TRAFFIC CONTROL SURVEILLANCE

(Effective January 1, 2016)

Revise the first sentence of Article 701.10 of the Standard Specifications to read:

701.10 Surveillance. When open holes, broken pavement, trenches over 3 in. (75 mm) deep and 4 in. (100 mm) wide, or other hazards are present within 8 ft (2.4 m) of the edge of an open lane; when opposing directions of traffic are separated by barrier wall; or on a closed road from the time a structure is removed until the time the structure has been replaced, the Contractor shall furnish traffic control surveillance during all hours when the Contractor is not engaged in construction operations

PLASTIC DRUMS

(Effective August 15, 2005; Revised April 27, 2018)

Plastic drums according to Standard 701901 shall be used in lieu of cones, Type I and Type II barricades, and vertical barricades throughout lane closures.

TEMPORARY PATCHES FOR STAGE CONSTRUCTION

This work shall consist of providing temporary pavement patching during the construction of storm sewers and pipe culverts.

The Traffic Control Plan and the Maintenance of Traffic plan details require one lane of traffic to be open in each direction at all times. The Contractor shall also construct the across-road storm sewers and pipe culverts during the off-peak hours of 8:00 PM to 6:00 AM of the following day per the Maintenance of Traffic General Notes. The Contractor may utilize temporary pavement patches to keep the lanes open as required during the placement of the storm sewers and pipe culverts.

The temporary patches shall consist of CA-6 or CA-10 from the subgrade elevation to within 3 inches of the existing surface, and a 3-inch lift of either cold-mix asphalt or hot-mix asphalt used for the top surface. The materials shall be compacted to the satisfaction of the Engineer.

Temporary patches shall be maintained as directed by the Engineer until they are removed and replaced with either a permanent pavement patch or the proposed pavement structure.

Temporary patches will not be paid for separately, but will be considered as included in the various unit prices of the contract.

STATUS OF UTILITIES TO BE ADJUSTED
 (Effective January 1, 2007; Revised January 24, 2011)

Name & Address of Utility	Type	Location	Estimated Date Relocation Complete
<p>ComEd, An Exelon Company Two Lincoln Centre, 8th Floor Oakbrook Terrace, IL 60181</p> <p>ComEd Ref# H21573UNV</p> <p>Relocate 9 poles, 1625' of ug electric cable, and brace 4 poles during construction.</p> <p>Pole bracing can require a six week notice so please call early.</p> <p>Call 1-800-334-7661 for any other Facility Protection of overhead electric. Charge may apply for this protection.</p>	<p>Overhead electric 12kV distribution</p> <p>Overhead electric 34kV transmission</p> <p>Underground electric</p>	<p>ComEd has electric facilities throughout the project limits, both overhead and underground.</p>	<p>Poles to be relocated: <u>Single circuit 12 kV:</u> 161+34 43' Lt.</p> <p><u>Single phase - Secondary poles:</u> 155+97 36' Lt and 157+33 39' Lt; 158+95 36' Lt.</p> <p><u>Double circuit poles 34 & 12 kV:</u> 167+50 67'Rt; 169+20 67'Rt; 170+59 45'Rt; 173+05 42'Rt; 174+75 43'Rt; and 176+60 42' Rt.</p> <p>Poles to be braced: 161+34 74'Rt, 163+48 70' Rt, 165+70 71' Rt, and 173+00 49'Lt.</p> <p>A permit will be required.</p>

<p>Nicor Gas 1844 Ferry Road Naperville, IL 60563</p> <p>Nicor Ref# SC17774</p>	<p>Buried Gas 2", 8", and 12" steel</p>	<p>Nicor has gas facilities throughout the project limits.</p> <p>There is a 12" main which runs along the south side of Armour Road, starting at the western limits and extending to the eastern limits.</p>	<p>There are conflicts with the 12" at the following Armour Road locations: 157+71 34' Rt; 157+81 34' Rt; 158+25 35' Rt; 159+00 37' Rt; 160+25 39'Rt; 160+90 39'Rt; 164+50 51' Rt; 164+60 61' Rt; 164+86 84' Rt; 169+03 44'Rt; 172+21 44'Rt; and 1288+40 172' Rt.</p> <p>There are conflicts with the 8" at the following locations: 164+10 246 Lt; 164+15 243' Lt.</p> <p>There are conflicts with the 2" at the following locations: 1277+50 123' Rt; 1284+60 132' Rt; 1284+84 125.5' Rt; 1285+00 to 1288+30 104' Rt; 1290+36 123' Lt; 172+60 69' Lt; 172+70 85' Lt; 172+90 36' Rt.</p> <p>A permit will be required.</p>
<p>AT&T 1000 Commerce Drive Oak Brook, IL 60523</p> <p>AT&T Ref# KK2108</p>	<p>Buried Telephone</p>	<p>AT&T has facilities throughout the project limits.</p>	<p>There are numerous conflicts throughout the project limits.</p> <p>Test hole permit 17709 was approved in October of 2020.</p> <p>A permit will be required.</p>

<p>Comcast Cable 688 Industrial Drive Elmhurst, IL 60126</p>	<p>Overhead and Buried CATV</p>	<p>Overhead on ComEd poles along the south ROW, in the SE quadrant of the intersection.</p> <p>Buried in the SE quadrant of the intersection and then it extends southward along the east side of IL 50.</p>	<p>Approximately five of the ComEd poles will have to be relocated. The buried cable will also have conflicts.</p> <p>The underground location along the east side of IL 50 (south of Armour) is unknown but probably in conflict at this location.</p> <p>A permit will be required.</p>
<p>Aqua Illinois 1000 S. Schuyler Ave. Kankakee, IL 60901</p>	<p>12" water main</p> <p>6" force main (purchased from Bourbonnais in Sept 2021)</p>	<p>Along the south ROW.</p> <p>In the NW quadrant of the intersection. It runs along the north side of Armour Road from 154+70 to 161+60, where it turns north along the west side of Arthur Burch Drive.</p>	<p>Aqua has numerous conflicts throughout the project limits.</p> <p>A permit will be required for water main relocations.</p> <p>There are numerous conflicts with this 6" force main and it will need to be relocated in some areas. The Village will have to maintain 604' of force main that will be located under the pavement.</p> <p>A permit will be required for the force main work.</p>

<p>Village of Bourbonnais (Aqua purchased the sewer system from Bourbonnais in late August of 2021.)</p>	<p>12" sanitary sewers Forcemain</p>	<p>Located in both the NE and SE quadrants. In the NW quadrant near Arthur Burch Drive going west.</p>	<p>The 12" sanitary sewer is tight in the NE quadrant and may need to be relocated. In the SE there are conflicts with the proposed ditch, and it will need to be relocated from 1277+10 to 1280+25 and 1283+25 to 1286+75. Permit 18314 was approved in late 2021 to directionally bore a PVC force main from Arthur Burch Drive going 750' west.</p>
<p>Village of Bradley</p>	<p>12" sanitary sewer</p>	<p>The sanitary sewer runs along the east side of IL 50 from the south project limits and crosses Armour Road near station 168+70. Then it turns east and runs along the north side of Armour Road. Bradley will have to relocate the 12" sanitary sewer from 1277+00 RT to 1280+30 RT.</p>	<p>This work was completed by the Village in late June 2021. No conflicts are anticipated. Permit 17649 was approved on 4-28-2021. This work was completed in approximately June of 2021.</p>

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Section 102 and Articles 105.07, 107.20, 107.37, 107.38, 107.39, 107.40, and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply.

The estimated utility relocation dates should be part of the progress schedule submitted by the Contractor.

** Above utility information reflected as of December 10, 2021; relocation completion dates (if any) are unknown at this time. Per SB 699 (90-day utility relocation law), a notice will be sent to the utility companies instructing them to have their facilities relocated within 90 days. Utility relocations are anticipated to be complete by April 1st of 2023.

UTILITY RELOCATIONS AND DELAYED START DATE

(Effective January 1, 2022)

It is anticipated that utility relocations will be underway when this project is awarded. The Contractor should assume that the start date for work on this project will be April 1, 2023, unless approved by the Engineer, to allow for utility relocations to be completed.

- Work associated with tree removal shall be performed as outlined per the tree removal commitment.

No working days shall be charged, and no additional compensation shall be due the Contractor for delays prior to April 1, 2023.

COOPERATION BETWEEN CONTRACTORS

It is anticipated that a bridge replacement project for the structure just west of this project will be under contract at the same time as this contract. The roadway improvement for the bridge project will abut with the west limits of this contract.

The contractor shall cooperate with the contractor(s) on the other project as described in Article 105.08 of the Standard Specifications.

The other project will be constructed as Contract number 66F11 – Bridge Replacement on SN 046-0063.

PAVEMENT PATCHING

(Effective April 11, 2016; Revised April 27, 2018)

Description. This work shall consist of the removal of the existing pavement, the necessary excavation and the replacement with the class and type of patch specified at designated locations.

This work shall be according to Section 442 of the Standard Specifications for Class A and Class B patching and as modified herein.

Materials. Materials shall be according to Article 442.02 of the Standard Specifications and as modified below.

Revise the first paragraph of Article 1020.05(d)(2)b(2) to read:

- (2) Class C Fly Ash. For cement aggregate mixture II, Class PV, RR, BS, PC, PS, DS, SC, and SI concrete, Class C fly ash shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together. For PP-1 and PP-2 concrete, Class C fly ash shall be a minimum of 15.0 percent by weight (mass) of the cement and finely divided minerals summed together.

Revise the first paragraph of Article 1020.05(d)(2)b(3) to read:

- (3) When GGBF slag is used in Class PV, RR, BS, PC, PS, DS, SC, and SI concrete, ground granulated blast-furnace slag shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together. For PP-1 and PP-2 concrete, Ground Granulated Blast-Furnace Slag shall be a minimum of 15.0 percent by weight (mass) of the cement and finely divided minerals summed together.

CONSTRUCTION REQUIREMENTS

Pavement Removal. Pavement removal shall be according to Article 442.05 of the Standard Specifications and as modified herein.

Revise Article 442.05(a) to read:

- (a) Class A Patches. Two transverse full depth saw cuts shall be made perpendicular to the centerline at each end of the patch, except that the saw cuts may be skewed slightly if necessary to maintain a minimum distance of 18 inches from the end of the patch to the nearest transverse crack in the pavement to remain in place. When approved by the Engineer, this minimum distance may be reduced to 6 inches in areas of close crack spacing where the pavement otherwise appears to be sound. The longitudinal edges of the patch shall be formed by full-depth saw cuts. Saw cut extensions into pavement which is to remain in place will not be permitted. All saw cuts shall be made with an approved concrete saw. After the transverse saw cuts have been made, intermediate cuts as shown on plan details may be made to make pressure relief cuts or to reduce the pavement length to a size that accommodates removal and hauling operations. The saw cutting operations shall be controlled to limit subbase penetration to a maximum of 1/2 inch.

The shoulder between the full-depth saw cut and the pavement edge shall be removed using a handheld hammer and hand tools prior to pavement removal. If available, the Contractor may use an approved wheel saw to make the shoulder cut and removal.

When the patch is adjacent to a portland cement concrete shoulder, a saw cut shall be made at the shoulder-pavement joint sufficiently deep to sever the tie bars. A second full-depth saw cut shall be made in the pavement a minimum of 4 inches from the edge of the shoulder. The pavement between the full-depth saw cut and the shoulder edge shall be removed using a handheld hammer and hand tools prior to removal of the remaining pavement.

The pavement between the saw cuts shall be removed by lifting. Sufficient care shall be taken to minimize subbase disturbance and prevent spalling of the pavement that is to remain in place. Any subbase or stabilized subbase material disturbed during pavement removal operations or determined unsuitable by the Engineer shall be removed and replaced with patch material.

If the Engineer determines that the concrete has deteriorated to the extent that it is not practical to lift, the pavement may be broken into small pieces and removed. The breaking equipment shall not transfer impact energy greater than 3,000 foot/pound per blow to the pavement surface.

Should the Contractor's operations cause a spall having a width or depth greater than 1 inch in the pavement to remain in place or cause excessive shattering or underbreaking of the existing slab to remain in place, a new saw cut shall be made extending the patch to remove the spall or underbreaking. After pavement removal, the pavement structure will be inspected by the Engineer to determine if it is sufficiently sound. If determined unsound, the Contractor shall extend the patch as directed by the Engineer.

Revise Article 442.06(a)(1) to read:

(a) Reinforcement, Dowel Bars, and Joints. Reinforcement, dowel bars, and joints shall be according to the following.

(1) Class A Patching. The reinforcement shall be constructed according to Articles 508.03 through 508.09. Patches more than 20 feet in length, including half-lane patches, shall be tied to the adjacent pavement, portland cement concrete shoulders, and curb and gutter with No. 6 transverse epoxy coated tie bars, 24 inch long, embedded 8 inch at 36 inch centers according to Article 420.05(b).

Patch reinforcement (longitudinal) shall be tied to No. 6 epoxy coated tie bars, 32 inches long, drilled and grouted 8 inches into existing pavement at a spacing that matches that of the existing pavement reinforcement.

The Contractor shall tie the steel together using at least two secure ties for each lap splice according to Article 508.08(a)(1).

Reinforcement steel shall be placed and supported on chairs according to Article 508.06, and the placement tolerance for individual reinforcement bars shall be ± 1 inch horizontally and vertically.

When the existing reinforcement is welded wire reinforcement, the longitudinal reinforcement bars shall be the same size and spacing as the existing longitudinal reinforcement.

Revise the sixth paragraph of Article 442.06(a)(2) of the Standard Specifications to read:

"Patches more than 20 feet in length shall be tied to the adjacent lane of pavement, portland cement concrete shoulders, and curb and gutter with No. 6 tie bars, 24 inches long, embedded 8 inches at 36 inch centers according to Article 420.05(b)."

Add the following sentence to the first paragraph of Article 442.06(d):

The patch material shall match the elevation of the existing concrete pavement or hot-mix asphalt surface.

VIBRATORY ROLLER RESTRICTION

(Effective November 26, 2013)

The use of vibratory rollers in dynamic mode shall not be allowed on bridge decks and in urban areas that may include aging infrastructure under the roadway. These locations will be determined in the field by the Engineer.

The restriction of dynamic vibratory rollers in these areas shall not waive density requirements.

HOT-MIX ASPHALT SURFACE REMOVAL, 3”

This work shall consist of the complete removal and disposal of the hot-mix asphalt (HMA) that has an existing aggregate base. The existing HMA that is on top of the aggregate base shall be removed at various driveways, parking lots, street returns and on Arthur Burch Drive as shown on the plans and at other locations as specified by the Engineer.

The work shall be done in accordance with the applicable portions of Section 440 of the Standard Specifications. The contractor shall saw the existing HMA full depth at the removal limits to provide a neat butt joint for the proposed HMA Resurfacing.

Method of Measurement. The surface removal will be measured for payment according to the requirements of Article 440.07 (a) or (b) of the Standard Specifications.

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

HOT-MIX ASPHALT SURFACE REMOVAL (SPECIAL)

This work shall consist of the partial removal and disposal of the proposed hot-mix asphalt (HMA) variable depth binder at the locations shown in the plans to allow the construction of the proposed corner islands.

Removal of the HMA binder shall be done in accordance with applicable portions of Section 440 of the Standard Specifications. The HMA binder shall be removed to the lines and grades shown on the corner island details that are included in the plans.

Method of Measurement. The surface removal will be measured for payment according to the requirements of Article 440.07 (a) or (b) of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL (SPECIAL).

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

This work shall consist of the variable depth removal of hot-mix asphalt (HMA) surfaces in preparation for subsequent resurfacing.

The variable depth removal shall be performed as detailed on the plans and according to the applicable portions of Section 440 of the Standard Specifications. The existing HMA surfaces shall be removed to the depths shown in the variable depth milling tables to achieve the specified lines and grades for the proposed HMA resurfacing.

Method of Measurement. The variable depth surface removal will be measured for payment according to the requirements of Article 440.07 (a) or (b) of the Standard Specifications.

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

COLD MILLING EXISTING MEDIAN

This work shall consist of the partial depth removal of existing solid concrete medians according to the applicable portions of Section 440 of the Standard Specifications.

The portland cement concrete median shall be removed to the depth specified in the plans using a self-propelled milling machine.

Method of Measurement. The partial depth removal will be measured for payment according to the requirements of Article 440.07 (a) or (b) of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per square yard for COLD MILLING EXISTING MEDIAN.

HMA SURFACE REMOVAL FOR SUBSEQUENT RESURFACING

Add the following to Article 440.04 of the Standard Specifications:

The HMA surface removal areas may have existing PC concrete pavement patches that have been poured to the surface. The PC concrete patches shall be removed to the depth designated for the HMA surface removal.

All milled surfaces shall be cleaned by the use of air jets, water jets, mechanical sweeper, hand brooms, or other approved methods, or as required by the Engineer, until the surface is free of all dust, debris, millings and all loose or foreign matter.

STORM SEWER (WATER MAIN REQUIREMENTS)

(Effective July 1, 1990; Revised January 1, 2009)

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

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

The storm sewer shall be constructed of

Ductile iron pipe, Class 52 with bell and rubber gasket joint or

Concrete pressure pipe conforming to the latest AWWA Standard C300, C301, C303 or

Plastic pipe meeting the material requirements of Section 40. Pipe for Water Mains and Service Connections of the Standard Specifications for Water and Sewer Main Construction in Illinois and Section 550 of the Standard Specifications.

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

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

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

TEMPORARY DRAINAGE INTO PROPOSED DRAINAGE STRUCTURES

This work shall consist of providing temporary drainage into the proposed drainage structures that are located in sag locations. The work shall consist of a 4-inch PVC or polyethylene pipe installed from the surface of the proposed widening near the resurfacing lip of the combination concrete curb and gutter into the proposed drainage structure. The 4-inch pipe shall be cut flush with the proposed widening as directed by the Engineer. Prior to the final HMA resurfacing operations, the 4-inch pipe shall be filled with Class Sl concrete.

This work will not be paid for separately, but shall be considered as included in the various unit prices of the contract.

STORM SEWER AND SANITARY SEWER REMOVAL

This work shall consist of the removal of existing storm sewers and sanitary sewers that interfere with the proposed construction and as shown on the plans.

This work shall be performed in accordance with Article 551.03 of the Standard Specifications, except the sewer pipe will not be salvaged and it shall be disposed according to Article 202.03.

The backfilling of the trenches resulting from the sewer removal shall be according to the applicable portions of Article 550.07 of the Standard Specifications. When trench backfill is specified by Article 550.07, the trenches that are located under the existing and proposed pavement structure, including the adjacent combination curb and gutter, and under the proposed entrances shall be backfilled with Controlled Low Strength Material (CLSM). The CLSM material shall meet the requirements of Section 1019 of the Standard Specifications. The weather and temperature placement requirements for the CLSM shall be according to Section 593 of the Standard Specifications.

Method of Measurement. This work will be measured for payment in place in feet.

Basis of Payment. This work will be paid for at the contract unit price per foot for STORM SEWER REMOVAL of the diameter specified; or SANITARY SEWER REMOVAL 12”.

Trench backfill and CLSM, when required, will not be paid for separately.

STORM SEWER OR CULVERT TO BE FILLED

(Effective June 13, 1997; Revised January 1, 2007)

Description. This work shall consist of cleaning and then filling storm sewer or culvert pipes to be abandoned.

Materials. The material to fill the pipes shall be Controlled Low Strength Material (CLSM) meeting the requirements of Section 1019 of the Standard Specifications.

Construction Requirements. The inside of the pipe shall be cleaned of all unsuitable material and debris before placing the CLSM. The pipe shall be completely filled. The method used for filling the pipe and containing the CLSM at the pipe ends shall be at the Contractor's option.

The weather and temperature placement requirements of Section 593 of the Standard Specifications shall apply.

Method of Measurement. The volume for payment of CLSM shall be the measured volume in cubic yards (cubic meters) of the culvert to be filled. Cleaning the culvert will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for CONTROLLED LOW-STRENGTH MATERIAL.

REMOVAL OF EXISTING STRUCTURES

This work shall consist of the complete removal of the existing structures as indicated on the plans and in accordance with Section 501 of the Standard Specifications.

Structure No. 1. Complete removal of the existing 3' x 2' concrete box culvert, concrete headwalls, and the precast concrete flared end sections at AR station 1286+00.90.

Structure No. 2. Complete removal of the existing 3' x 2' concrete box culvert, concrete headwalls, 36" concrete pipe extensions and the precast concrete flared end sections at AR station 1297+87.

Method of Measurement. This work will be measured for payment in accordance with Article 501.06 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price each for REMOVAL OF EXISTING STRUCTURES NO. 1; and at the contract unit price each for REMOVAL OF EXISTING STRUCTURES NO. 2.

BACKFILL FOR STORM SEWERS AND PIPE CULVERTS

This work shall consist of placing either trench backfill or controlled low strength material (CLSM) in accordance with the applicable portions of Article 550.04, Article 550.07, Section 208 and Section 593 of the Standard Specifications and the following requirements.

The excavation and foundation for the proposed pipe culverts shall be in accordance with Article 550.04 of the Standard Specifications.

The backfilling of both storm sewers and pipe culverts shall be in accordance with Article 550.07 of the Standard Specifications. When trench backfill is specified by Article 550.07, the trenches that are located under the existing and proposed pavement structure, including the adjacent combination curb and gutter, and under the proposed entrances shall be backfilled with CLSM material.

Method of Measurement. This work will be measured for payment in accordance with Article 208.03 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per cubic yard for TRENCH BACKFILL; and at the contract unit price per cubic yard for CONTROLLED LOW-STRENGTH MATERIAL.

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL) AND WATER VALVES TO BE ADJUSTED, SPECIAL (Effective June 1, 2012)

Description. This work shall consist of adjusting frames and lids and water valves. This work shall be done according to the applicable portions of Section 603 of the Standard Specifications and the following.

Construction Requirements. Prior to the milling operation, the Contractor shall remove all frames and lids of manholes and water valves. After removal, the Contractor shall place a suitable metal plate over the manhole and water valve locations and backfill the area with a temporary hot-mix or cold-mix asphalt mixture. The Contractor shall then complete the milling and placement of all HMA lifts except surface course.

Prior to placing the surface course, the Contractor shall reinstall the frames and lids and water valves and adjust them to the finished pavement elevation.

The excavated area around the manholes and water valves shall be filled with Class PP-1 or PP-2 concrete.

Basis of Payment. This work will be paid at the contract unit price each for FRAMES AND LIDS TO BE ADJUSTED (SPECIAL) and WATER VALVES TO BE ADJUSTED, SPECIAL.

MANHOLES TO BE ADJUSTED (SPECIAL)

This work shall consist of adjusting manholes in pavement areas according to the applicable portions of Sections 602 and 603 of the Standard Specifications and the following requirements.

Prior to the milling operation, the Contractor shall remove all frames and lids of the manholes. After removal, the Contractor shall place a suitable metal plate over the manhole locations and backfill the area with a temporary hot-mix or cold-mix asphalt mixture. The Contractor shall then complete the milling and placement of all HMA lifts except the surface course.

Prior to placing the surface course, the Contractor shall either reinstall the salvaged frames and lids or provide new frames and lids per the plan details and adjust them to the finished pavement elevation.

The excavated area around the manholes shall be filled with Class PP-1 or PP-2 concrete.

Basis of Payment. This work will be paid for at the contract unit price each for MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID, SPECIAL.

FILLING EXISTING BOX CULVERTS

This work shall consist of cleaning and then filling the existing 5' x 2' concrete box culvert at AR station 167+57.94.

The inside of the box culvert shall be cleaned of all unsuitable material and debris. The box culvert shall then be completely filled with controlled low strength material (CLSM). The method used for filling the box culvert and containing the CLSM at the culvert ends shall be at the Contractor's option.

The CLSM material shall conform to Section 1019 of the Standard Specifications. The weather and temperature placement requirements of Section 593 of the Standard Specifications shall apply.

Basis of Payment. This work will be paid for at the contract unit price each for FILLING EXISTING BOX CULVERTS.

FENCE REMOVAL

This work shall consist of removing existing chain link fence at the locations shown in the plans. This work shall be performed in accordance with applicable portions of Section 201 of the Standard Specifications. The fence shall be removed from an existing post to an existing post within the limits necessary to perform the required construction operations. The fence materials shall be disposed of in accordance with Article 202.03 of the Standard Specifications.

Method of Measurement. This work will be measured for payment in place in feet.

Basis of Payment. This work will be paid for at the contract unit price foot for FENCE REMOVAL.

COMBINATION CONCRETE CURB AND GUTTER, (ABUTTING EXISTING PAVEMENT)

The proposed combination curb and gutter shall be constructed in accordance with Section 606 of the Standard Specifications. The proposed concrete curb and gutter shall be tied to the existing portland cement concrete pavement or base course utilizing the LONGITUDINAL CONSTRUCTION JOINT (tie bar grouted in place) detail on Standard 420001. Contraction joints shall be constructed to match the existing contraction joints in the pavement and additional joints may be needed to provide a maximum spacing of 15 feet between joints.

Method of Measurement. The combination curb and gutter will be measured for payment according to the requirements of Article 606.14.

Basis of Payment. This work will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, (ABUTTING EXISTING PAVEMENT), of the type specified.

Furnishing and placing the specified tie bars will not be paid for separately.

COMBINATION CONCRETE CURB AND GUTTER

The proposed combination curb and gutter shall be constructed in accordance with Section 606 of the Standard Specifications and District Details 606-5 and 606-7.

The proposed concrete curb and gutter that is constructed adjacent to the proposed Portland cement concrete base course shall be tied to the base course according to the LONGITUDINAL CONSTRUCTION JOINT (tie bar grouted in place) detail on Standard 420001. The proposed concrete curb and gutter that is constructed adjacent to proposed flexible pavement shall be reinforced with longitudinal reinforcement as shown on the District Details 606-5 and 606-7.

Method of Measurement. The combination curb and gutter will be measured for payment according to the requirements of Article 606.14.

Basis of Payment. This work will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, of the type specified.

Furnishing and placing the specified tie bars and the longitudinal reinforcement will not be paid for separately.

TEMPORARY STORM SEWER

This work shall consist of the installation and maintenance of temporary storm sewers to maintain drainage during construction according to the applicable portions of Section 550 of the Standard Specifications, the plan details, and the following requirements.

The material used for temporary storm sewers shall conform to Article 550.03 and shall be either Class A or Class B pipe. Temporary storm sewers shall be installed in accordance with applicable portions of Section 550 of the Standard Specifications. The Contractor shall provide any bends, tees, or fittings necessary to make connections between the existing sewer and the temporary sewer. The Contractor shall maintain the temporary storm sewers until the permanent drainage items are in place and the temporary drainage is no longer needed.

The temporary storm sewers shall be either removed or filled after the permanent drainage items are in place and the temporary drainage is no longer needed. The removal of the sewers shall be performed in accordance with applicable portions of Article 551.03 of the Standard Specifications, except there will be no salvaged sewer pipe. The sewers that are left in place shall be plugged and filled with controlled low strength material following the requirements of the Special Provision for STORM SEWER OR CULVERT TO BE FILLED.

Method of Measurement. Temporary storm sewers will be measured in accordance with Article 550.09 of the Standard Specifications. The measured length will include the length of any bends, tees, and fittings.

Basis of Payment. This work will be paid for at the contract unit price foot for TEMPORARY STORM SEWER, of the diameter specified.

The removal and filling of the temporary storm sewers will not be paid for separately.

FLARED END SECTION REMOVAL

This work consists of the complete removal of existing precast concrete flared end sections as specified in Article 501.04 of the Standard Specifications and the following requirements.

The removal of existing pipe culverts and storm sewers shall include the removal of the attached precast concrete flared end sections and any toe blocks and aprons that are attached. Existing flared end sections as designated on the plans shall also be removed that are not attached to storm sewers and pipe culverts that are designated for removal.

Method of Measurement. The precast flared end sections that are attached to and removed with either storm sewers or pipe culverts shall be measured for payment in place, in feet along the invert of the end section.

Precast flared end sections that are not attached to either a storm sewer or pipe culvert that is designated for removal shall be measured in units of each at the designated locations.

Basis of Payment. This work will be paid for at the contract unit price per foot for either STORM SEWER REMOVAL, of the diameter specified, or at the contract unit price per foot for PIPE CULVERT REMOVAL.

Precast flared end sections that are not attached to either a storm sewer or pipe culvert that is designated for removal will be paid for as a separate item at the contract unit price each for REMOVE EXISTING FLARED END SECTION.

LANDSCAPING RESTORATION

This work shall consist of the landscape restoration at the Mall entrance Rt. Station 1282+87.

The landscaped area in the median shall be disturbed for the pipe culvert installation under the Mall entrance. The median area shall be restored to the original condition after the completion of the construction. Restoration work shall include, but not be limited to, the furnishing and placement of topsoil, decorative stone, bark mulch, and other materials to replace in kind materials disturbed by the construction activities.

This work will not be paid for separately but shall be considered as included in the various unit prices of the contract.

CONCRETE MEDIAN, TYPE SM (SPECIAL)

This work shall consist of the construction of solid concrete medians in accordance with Section 606 of the Standard Specifications, Standard 606301 and the following requirements.

The construction limits for the solid concrete medians on the corner islands shall be as shown on the corner island detail tables and referenced as the end of ramp nose at the back of curb. The construction limits for the Illinois Route 50 solid concrete median noses shall be as shown on the plan details.

Method of Measurement. This work will be measured for payment in accordance with Article 606.14.

Basis of Payment. This work will be paid for at the contract unit price square foot for CONCRETE MEDIAN, TYPE SM (SPECIAL).

CONCRETE MEDIAN, TYPE SB (DOWELLED)

This work shall consist of the construction of dowelled concrete medians in accordance with Section 606 of the Standard Specifications, Standard 606301, the plan details, and the following requirements.

The dowelled medians shall be constructed at the locations shown on the plans and according to the plan details. The material for the deformed rebar and the welded wire reinforcement shall

meet the requirements of Article 1006.10. The mortar for grouting the rebar in the drilled holes shall be either a non-shrink grout according to Article 1024.02 or a chemical adhesive resin system according to Article 1027.01. Immediately prior to grouting the rebar, the holes shall be thoroughly cleaned of drilling debris. Dust and debris shall be blown from the holes with compressed air.

Method of Measurement. This work will be measured for payment in accordance with Article 606.14.

Basis of Payment. This work will be paid for at the contract unit price square foot for CONCRETE MEDIAN, TYPE SB (DOWELLED).

PRECAST CONCRETE BOX CULVERT 10' X 5'

This work shall consist of constructing precast concrete box culverts 10' x 5' in accordance with the applicable portions of Section 540 of the Standard Specifications, the plan details, and according to the following requirements.

The upstream and downstream box culvert sections shall be cast with monolithic end walls. The upstream and downstream sections shall also provide openings for storm sewers as shown on the plan details and shall provide access holes for inspection and maintenance.

The upstream section of the box culvert shall be cast with a monolithic end wall and provide an opening that will accept a 36" diameter storm sewer through the side wall as shown on the plans. The flowline of the 36" sewer shall be 4" above the floor of the box culvert.

The downstream section of the box culvert shall be cast with a monolithic end wall and provide an opening to accept a 36" diameter storm sewer through the side wall as shown on the plans. The flowline of the 36" sewer shall be flush with the floor of the box culvert.

The top of the upstream and downstream sections of the box culvert shall be cast with 48" diameter holes to accept 48" diameter riser sections. The edge of the holes shall be as close as possible to the end walls. The 48" diameter risers shall be according to Standard 602406 with flat slab tops according to Standard 602401 being used on top of the risers. The risers shall have manhole steps as shown on the Standard and the riser heights shall be as shown on the plans. Type I frames with closed lids shall be provided and installed on the flat slab tops.

The excavation and backfilling of the box culvert sections shall be in accordance with the applicable portions of Article 540.06 and Section 502 of the Standard Specifications. The backfill material for the box culvert shall be either CA-06 or CA-10 placed in continuous horizontal layers not more than 8 inches in thickness, loose measurement, and shall be compacted with a mechanical tamper.

Method of Measurement. This precast box culverts shall be measured in feet, except the length measured shall not exceed the length shown on the plans or authorized by the Engineer. The overall length shall be measured as shown on the plans along the centerline of the culvert. The upstream and downstream sections of the culvert as specified will be included in the overall length measurement of the culvert.

Basis of Payment. This work will be paid for at the contract unit price foot for PRECAST CONCRETE BOX CULVERTS 10' X 5'.

PRECAST CONCRETE BOX CULVERT 8' X 4'

This work shall consist of constructing precast concrete box culverts 8' x 4' in accordance with the applicable portions of Section 540 of the Standard Specifications, the plan details, and according to the following requirements.

The upstream and downstream box culvert sections shall be cast with monolithic end walls. The upstream and downstream sections shall also provide openings for storm sewers as shown on the plan details and the downstream section shall provide an access hole for inspection and maintenance.

The upstream section of the box culvert shall be cast with a monolithic end wall and provide openings that will accept a 36" diameter storm sewer and a 24" diameter sewer through the walls as shown on the plans. The opening for the 36" diameter sewer shall be near the center of the monolithic end wall and the flowline shall be 4" above the floor of the box culvert. The opening for the 24" sewer shall be through the side wall of the box and the flowline shall be as shown on the plans.

The downstream section of the box culvert shall be cast with a monolithic end wall and provide an opening to accept a 30" diameter storm sewer through the side wall of the box as shown on the plans. The flowline of the 30" sewer shall be flush with the floor of the box culvert.

The top of the downstream section of the box culvert shall be cast with a 48" diameter hole to accept a 48" diameter riser section. The edge of the hole shall be as close as possible to the end wall. The 48" diameter riser shall be according to Standard 602406 with a flat slab top according to Standard 602401 being used on top of the riser. The riser shall have manhole steps as shown on the Standard and the riser height shall be as shown on the plans. Type I frame with a closed lid shall be provided and installed on the flat slab top.

The excavation and backfilling of the box culvert sections shall be in accordance with the applicable portions of Article 540.06 and Section 502 of the Standard Specifications. The backfill material for the box culvert shall be either CA-06 or CA-10 placed in continuous horizontal layers not more than 8 inches in thickness, loose measurement, and shall be compacted with a mechanical tamper.

Method of Measurement. This precast box culverts shall be measured in feet, except the length measured shall not exceed the length shown on the plans or authorized by the Engineer. The overall length shall be measured as shown on the plans along the centerline of the culvert. The upstream and downstream sections of the culvert as specified will be included in the overall length measurement of the culvert.

Basis of Payment. This work will be paid for at the contract unit price foot for PRECAST CONCRETE BOX CULVERTS 8' X 4'.

SANITARY MANHOLES TO BE RECONSTRUCTED

This work shall consist of the reconstruction of sanitary manholes in accordance with Section 602 of the Standard Specifications and the Village of Bradley Standard no. SWR-3020 that is included in the plans.

The Contractor shall furnish and install a new frame with a gasketed closed lid on the reconstructed manhole as specified on Standard SWR-3020. An external manhole chimney seal shall also be furnished and installed according to the Standard.

This work will be paid for at the contract unit price each for SANITARY MANHOLES TO BE RECONSTRUCTED WITH NEW TYPE I FRAME, CLOSED LID.

SANITARY MANHOLES TO BE REMOVED

This work shall be consisting of the removal of sanitary manholes in accordance with Section 605 of the Standard Specifications.

This work will be paid for at the contract unit price each for SANITARY MANHOLES TO BE REMOVED.

SANITARY MANHOLES TO BE ADJUSTED

This work shall consist of the adjustment of sanitary manholes in accordance with Section 602 of the Standard Specifications and the Village of Bradley Standard no. SWR-3020 that is included in the plans.

The Contractor shall furnish and install an external manhole chimney seal according to Standard no. SWR-3020.

This work will be paid for at the contract unit price each for SANITARY MANHOLES TO BE ADJUSTED.

FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL

Description. This work shall consist of furnishing and installing a Super P Size Full-actuated Controller and Type IV Cabinet at location shown on plan details. A Super P Size Cabinet shall have an additional built-in compartment for battery backup in a single cabinet shell. This work also includes modifying the existing Type D foundation into a Type C foundation to support the Uninterruptible Power Supply (UPS) and a new apron to provide a standing pad for cabinet and UPS. Refer to detail MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION as shown in plans.

CONSTRUCTION REQUIREMENT

General. The Super P Size Full Actuated Controller and Type IV Cabinet shall meet the requirements of Sections 857, 1073 and 1074 of the Standard Specifications with the following

modifications.

- a) This item requires that a factory representative capable of ensuring that the controller and cabinet are operating to the satisfaction of the Engineer shall be present at the turn on of the controller and shall remain until the intersection is operating to the satisfaction of the Engineer. Should a defect appear in the controller or cabinet operation, the representative shall return as often as necessary until all defects are repaired.
- b) At the preconstruction meeting, the Contractor shall provide the names and phone numbers of two technicians who would be able to respond to controller malfunctions that occur within the 30 day acceptance period after the controller is turned on. If neither person can be reached at the time of the malfunction nor be at the location within 2 hours of receiving the call, any available electrician capable of evaluating and correcting the malfunction may be called at the State's discretion. Any and all bills resulting from defective operation of the controller or cabinet shall be the responsibility of the Contractor.

CONTROLLER.

- a) The controller shall be capable of uploading and downloading its database to a laptop computer that has been installed with the proper software. All uploaded data shall be able to be changed within the laptop and then downloaded to the controller. The necessary cables for upload/download shall be provided and upload/download software shall be provided and installed onto the District Three laptop computer if the software and cables have not already been supplied to District Three or the software presently being used by District Three requires updating. The controller shall be the latest version of TS 2 and shall have two (2) data keys.
- b) The controller data entry fields shall have a clear distinction between data fields and information. Data fields shall be in matrix format with a minimum of eight phases wide and four data lines deep.
- c) The active status screen shall display the following information for all operating phases in an alpha-numeric display.
- d) A clear distinction between the following detections for each phase: vehicle recall, vehicle detection, pedestrian recall, and pedestrian detection.
- e) A clear distinction among the phases receiving detection.
- f) Status displayed simultaneously whenever one or more of the following is operating: vehicle passage timer, maximum phase timer, added initial timer, time before reduction timer, time to reduce timer, existing gap timer, walk timer, don't walk timer.
- g) When a phase ends, the controller shall report whether the exit was a max out, gap out or force out condition. The controller shall show the yellow and red timers timing and any trailing overlap timers timing.
- h) The color of all operating overlaps.
- i) The phase of the controller shall be as shown in the plans.

- j) The controller shall be the latest version of the Mobotrex fully actuated unit.

CONTROLLER CABINET.

- a) The police door compartment shall contain a manual control cord from which the signals may be operated manually. The inside door toggle switches shall be protected from accidental contact by vertical metal slats. The slats shall extend beyond the switches, in a manner similar to the terminals on the back panel. A plastic plans holder shall be installed on the cabinet door. The holder shall be at least 11 inches high and 17 inches wide, shall open from the side, and shall not interfere with the filter. The holder shall have a means of closing the side opening to prevent water from entering.
- b) A Plexiglas cover, or other high strength nonconductive cover, shall be installed over, and completely cover, the power panel. The cover shall completely shield the service wires, and circuit breaker wires from accidental contact.
- c) A Plexiglas cover, or other high strength nonconductive cover, shall be installed over, and completely cover, the power terminals for the thermostatically controlled exhaust fan. The thermostat shall be of the knob type capable of adjustment by hand and without tools. The thermostat and terminals shall be mounted on the left or right side of the controller cabinet.
- d) All harness wiring of connectors A, B, C and D shall be factory installed so that an additional phase may be added to the existing phasing by the addition of a load switch and the proper conflict monitor card pinning.
- e) A self-adhering phasing diagram shall be placed on the inside of the cabinet door. Attach a phase and direction decal below the amplifiers.
- f) Train the wire along the inside of the cabinet for length and cleanliness.
- g) Add call push buttons on inside of cabinet.
- h) Place a thermostatically controlled electric heater in the cabinet with LED light bulbs.
- i) Traffic signal control and cabinet assembly shall be fully tested by the equipment supplier. Five (5) copies of the complete cabinet wiring showing all connections shall be furnished to the Engineer.
- j) The Contractor shall provide a concrete pad in front of the controller cabinet. This concrete pad shall be considered part of this item and no additional compensation will be allowed.
- k) Control cabinet shall have a pull-out drawer for a place to set a laptop and provide storage for cabinet prints and plans.
- l) A generator factory outlet in an enclosed door shall be provided for the Uninterruptable power supply.

Basis of Payment. This work will be paid for at the contract unit price per each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET,SPECIAL which price shall be payment in full to complete this work.

FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL

Description. This work shall consist of furnishing and installing a Super R Size Full-actuated Controller and Type V Cabinet at location shown on plan details. A Super R Size Cabinet shall have an additional built-in compartment for battery backup in a single cabinet shell. This work also includes modifying the existing Type D foundation into a Type C foundation to support the Uninterruptible Power Supply (UPS) and a new apron to provide a standing pad for cabinet and UPS. Refer to detail MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION as shown in plans.

CONSTRUCTION REQUIREMENT

General. The Super R Size Full Actuated Controller and Type V Cabinet shall meet the requirements of Sections 857, 1073 and 1074 of the Standard Specifications with the following modifications.

- a) This item requires that a factory representative capable of ensuring that the controller and cabinet are operating to the satisfaction of the Engineer shall be present at the turn on of the controller and shall remain until the intersection is operating to the satisfaction of the Engineer. Should a defect appear in the controller or cabinet operation, the representative shall return as often as necessary until all defects are repaired.
- b) At the preconstruction meeting, the Contractor shall provide the names and phone numbers of two technicians who would be able to respond to controller malfunctions that occur within the 30 day acceptance period after the controller is turned on. If neither person can be reached at the time of the malfunction nor be at the location within 2 hours of receiving the call, any available electrician capable of evaluating and correcting the malfunction may be called at the State's discretion. Any and all bills resulting from defective operation of the controller or cabinet shall be the responsibility of the Contractor.

CONTROLLER.

- a) The controller shall be capable of uploading and downloading its database to a laptop computer that has been installed with the proper software. All uploaded data shall be able to be changed within the laptop and then downloaded to the controller. The necessary cables for upload/download shall be provided and upload/download software shall be provided and installed onto the District Three laptop computer if the software and cables have not already been supplied to District Three or the software presently being used by District Three requires updating. The controller shall be the latest version of TS 2 and shall have two (2) data keys.
- b) The controller data entry fields shall have a clear distinction between data fields and information. Data fields shall be in matrix format with a minimum of eight phases wide and four date lines deep.

- c) The active status screen shall display the following information for all operating phases in an alpha-numeric display.
- d) A clear distinction between the following detections for each phase: vehicle recall, vehicle detection, pedestrian recall, and pedestrian detection.
- e) A clear distinction among the phases receiving detection.
- f) Status displayed simultaneously whenever one or more of the following is operating: vehicle passage timer, maximum phase timer, added initial timer, time before reduction timer, time to reduce timer, existing gap timer, walk timer, don't walk timer.
- g) When a phase ends, the controller shall report whether the exit was a max out, gap out or force out condition. The controller shall show the yellow and red timers timing and any trailing overlap timers timing.
- h) The color of all operating overlaps.
- i) The phase of the controller shall be as shown in the plans.
- j) The controller shall be the latest version of the Mobotrex fully actuated unit.

CONTROLLER CABINET.

- a) The police door compartment shall contain a manual control cord from which the signals may be operated manually. The inside door toggle switches shall be protected from accidental contact by vertical metal slats. The slats shall extend beyond the switches, in a manner similar to the terminals on the back panel. A plastic plans holder shall be installed on the cabinet door. The holder shall be at least 11 inches high and 17 inches wide, shall open from the side, and shall not interfere with the filter. The holder shall have a means of closing the side opening to prevent water from entering.
- b) A Plexiglas cover, or other high strength nonconductive cover, shall be installed over, and completely cover, the power panel. The cover shall completely shield the service wires, and circuit breaker wires from accidental contact.
- c) A Plexiglas cover, or other high strength nonconductive cover, shall be installed over, and completely cover, the power terminals for the thermostatically controlled exhaust fan. The thermostat shall be of the knob type capable of adjustment by hand and without tools. The thermostat and terminals shall be mounted on the left or right side of the controller cabinet.
- d) All harness wiring of connectors A, B, C and D shall be factory installed so that an additional phase may be added to the existing phasing by the addition of a load switch and the proper conflict monitor card pinning.
- e) A self-adhering phasing diagram shall be placed on the inside of the cabinet door. Attach a phase and direction decal below the amplifiers.
- f) Train the wire along the inside of the cabinet for length and cleanliness.
- g) Add call push buttons on inside of cabinet.

- h) Place a thermostatically controlled electric heater in the cabinet with LED light bulbs.
- i) Traffic signal control and cabinet assembly shall be fully tested by the equipment supplier. Five (5) copies of the complete cabinet wiring showing all connections shall be furnished to the Engineer.
- j) The controller cabinet shall be fully wired to accommodate the installation and proper operation of a Master Controller meeting the requirements of sections 860 and 1073 of the standard Specifications. The Master Controller shall be the latest version of the Mobotrex brand to ensure proper operation with existing equipment currently used and maintained by District 3. The Master Controller will be paid for elsewhere.
- k) The Contractor shall provide a concrete pad in front of the controller cabinet. This concrete pad shall be considered part of this item and no additional compensation will be allowed.
- l) Control cabinet shall have a pull-out drawer for a place to set a laptop and provide storage for cabinet prints and plans.
- m) A generator factory outlet in an enclosed door shall be provided for the Uninterruptable power supply.

Basis of Payment. This work will be paid for at the contract unit price per each for FULL-ACTUATED CONTROLLER AND TYPE V CABINET,SPECIAL which price shall be payment in full to complete this 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 intersections of Armour Road with IL Route 50, Aurthur Burch Drive and Locke Drive as shown on the plan details. 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 new 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 two (2) PTZ cameras and shall be mounted on a mast arm with the extension bracket if needed, using the manufacturer's guidelines. The two (2) PTZ cameras shall have great visibility for all 4 directions including all signal heads except near rights 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 cameras 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 new controller cabinet at the proposed traffic signal at the intersections of Armour Road with IL Route 50, Aurthur Burch Drive and Locke Drive.
- 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.

UNINTERRUPTIBLE POWER SUPPLY, EXTENDED

In addition to the requirements of Section 861 of the Standard Specifications, the following shall apply:

This work also includes placing heating pads below each battery and providing a blue indicator light. All installations shall meet the requirements of the details included on the plans and applicable portions of these specifications. The inverter shall be a Multi-Link or approved equal.

This work will be paid for at the contract unit price per each for UNINTERRUPTIBLE POWER SUPPLY, EXTENDED.

TEMPORARY TRAFFIC SIGNAL TIMING

This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the duration of the temporary signalized condition to the final completion of the traffic signal intersection.

All timings and adjustments necessary for this work shall be performed by and approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for IDOT District 3. The Contractor shall contact the Traffic Signal Engineer for a listing of approved Consultants.

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMING:

The Consultant shall attend temporary and permanent traffic signal inspections (turn-ons) and conduct on-site implementation of the traffic signal timings for both turn-ons.

The Consultant shall be responsible for making fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.

The Consultant shall provide monthly observation of traffic signal operations in the field.

The Consultant needs to calculate and implement new pedestrian, yellow, and red clearances according to the new State of Illinois policy.

The Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

Basis of Payment. This work will be paid for at the contract unit price per each for TEMPORARY TRAFFIC SIGNAL TIMING, which price shall be payment in full for performing all work described herein per intersection.

SIGNAL TIMING

This work shall consist of developing and implementing appropriate traffic signal timings for the permanent traffic signal installations at the intersections of Armour Road and IL Route 50, Armour Road and Arthur Burch Drive, and Armour Road and Locke Drive.

All timings and adjustments necessary for this work shall be performed by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for IDOT District 3. The Contractor shall contact the Traffic Signal Engineer for a listing of approved Consultants.

The following tasks are associated with SIGNAL TIMING:

The Consultant shall attend temporary and permanent traffic signal inspections (turn-ons) and conduct on-site implementation of the traffic signal timings for both turn-ons.

The Consultant shall be responsible for making fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.

The Consultant needs to calculate and implement new pedestrian, yellow, and red clearances according to the new State of Illinois policy.

The Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

Basis of Payment. This work will be paid for at the contract lump sum price for SIGNAL TIMING, which price shall be payment in full for performing all work described herein per intersection.

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. This system shall be furnished and installed into the existing controller cabinet.

The Video Vehicle Detection System shall be used at the traffic signal at the intersections of Armour Road with IL Route 50, Arthur Burch Drive and Locke Drive. 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.

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. This item includes installing any other equipment and rewiring anything in the cabinet needed to have the Video Vehicle Detection System work properly. 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.

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. See plan drawings on traffic signal plan sheets at Illinois 38 with Seventh and Tenth Street.

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.

DOUBLE HANDHOLE OR HANDHOLE, PORTLAND CEMENT CONCRETE

In addition to the requirements of Section 814 of the Standard Specifications, the following shall apply:

This work also includes placing the double handhole at a lower elevation than the traffic signal controller cabinet. This work also includes turning the hooks down in the handholes. All installations shall meet the requirements of the details included on the plans and applicable portions of these specifications.

Basis of Payment. The Double Handhole or Handhole, Portland Cement Concrete will be paid for at the contract unit price per each for DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE OR HANDHOLE PORTLAND CEMENT CONCRETE.

SERVICE INSTALLATION, GROUND MOUNTED

(Effective August 15, 2005; Revised January 1, 2007)

In addition to the requirements of Section 805 of the Standard Specifications the following shall apply:

Description. This work shall install, modify, or extend the electric service installation. All installations shall meet the requirements of the details included on the plans and applicable portions of these specifications.

Materials.

General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.

Enclosures: Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 3R unfinished signal door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125 inch thick, the top 0.250 inch thick and the bottom 0.500 inch thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full length tamper proof stainless steel .075 inch thick hinge bolted to the cabinet with stainless steel carriage bolts and nylock nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40 inches high, 16 inches wide, and 15 inches in depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.

Surge Protector. Over voltage protection, with LED indicator, shall be provided for the 120 volt load circuit by means of MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40° F to 185° F (-40° C to 85° C). The surge protector shall be UL 1449 Listed.

Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes. Unless otherwise noted on the plans, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.

Fuses. Fuse Holders, and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.

Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel, shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.

Utility Services Connections. The Contractor shall contact the utility company, prior to beginning work, to determine the utility company regulations relating to electrical service. The Contractor shall provide the utility company an estimated date that the service connection will be required, the agency which will be responsible for monthly service charges, and the connected load for flat rate billing if required. The customer service agreement with the utility company shall be executed by the agency responsible for monthly service charges.

All information furnished to the utility company shall be in writing with a copy provided to the Engineer. Prior to contacting the Utility Company for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.

During the interim between the service activation date and the signal turn on day, all energy charges for the intersection shall be paid by the Contractor according to Article 109.05 of the Standard Specifications. Beginning the day of the traffic signal turn on, all energy charges for the intersection will be paid by the responsible agency listed in the plans. The Contractor is responsible for making arrangements with the responsible agency to transfer billing to the responsible agency.

Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10' in length, and 0.75 inch in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary, additional rods shall be installed to meet resistance requirements at no additional cost.

Installation.

General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the Engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.

Ground mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and top of the foundation shall be caulked at the base with silicone. The contractor shall provide a 48" x 48" x 4" concrete pad at the front of the enclosure to provide a surface for a maintenance technician to stand on. The concrete pad shall be considered part of the pay item and no additional compensation will be allowed.

Basis of Payment. The service installation will be paid for at the contract unit price per each for SERVICE INSTALLATION, GROUND MOUNTED. The Type A foundation which includes the ground rod will be paid for separately.

MODIFYING EXISTING CONTROLLER AND CABINET

In addition to the requirements of Sections 885, 886, 888, and 895 of the Standard Specifications, this pay item shall include modifying the existing controller cabinets at IL Route 50 & I-57 South Junction and IL Route 50 & Commercial Entrance south of Armour Road for installation of the new Mobotrex fully actuated controller, new Mobotrex fiber optic transceiver which are paid for separately. This pay item shall also include a new 16 channel Malfunction Management Unit (MMU), that will not be paid for separately. This pay item shall include installing and programming the new controllers with the existing timing program running at the intersections. This pay item shall also include programming the new MMU to provide proper operation of the traffic signals at

the above intersections. This pay item shall also include all work and material required to interface the proposed fiber optic interconnect to the fiber optic transceivers and to provide proper operation of the traffic signals and closed-loop system. This item requires that a factory representative capable of ensuring that the controller and transceiver are operating to the satisfaction of the Engineer shall be present at the turn on of the controller and shall remain until the intersection is operating to the satisfaction of the Engineer. New cabinet drawings may be needed as directed by the Engineer.

The Contractor shall remove the existing controllers, transceivers, and conflict monitors. All items removed shall become the property of IDOT and shall be delivered to the Kankakee Maintenance yard at 1455 Brookmont Avenue.

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

OPTIMIZE TRAFFIC SIGNAL SYSTEM

This work shall consist of providing a revised Signal Coordination and Timing (SCAT) Report and implementing optimized timings to an existing previously optimized closed loop traffic signal system. This work is required due to the addition of a signalized intersection to an existing system or a modification of an existing signalized intersection, which affects the quality of an existing system's operation. MAINTENANCE OF THE SUBJECT INTERSECTION SHALL NOT BE ACCEPTED BY THE DEPARTMENT UNTIL THE OPTIMIZED TIMINGS ARE IMPLEMENTED AND THE SIGNALS ARE FUNCTIONING TO THE SATISFACTION OF THE ENGINEER.

The traffic signal system to be optimized includes the following intersections:

- Illinois Route 50 and Liberty Street.
- Illinois Route 50 and Broadway Street.
- Illinois Route 50 and North Street.
- Illinois Route 50 and Mulligan Drive.
- Illinois Route 50 and Lowe's Entrance.
- Illinois Route 50 and Meijer Entrance.
- Illinois Route 50 and Commercial Entrance south of Armour.
- Illinois Route 50 and Armour Road.
- Illinois Route 50 and Southbound I-57 Ramp.
- Illinois Route 50 and Northbound I-57 Ramp.
- Illinois Route 50 and Northfield Square Entrance.
- Illinois Route 50 and Pier One Entrance.
- Illinois Route 50 and Larry Power Road.
- Illinois Route 50 and McKnight Road.
- Illinois Route 50 and South Access Drive.
- Illinois Route 50 and St. George Road.
- Armour Road and Arthur Burch Drive.
- Armour Road and Locke Drive.
- Armour Road and Christine Drive.

For the purposes of optimization work, an intersection shall include all traffic movements operated by the subject controller and cabinet.

The traffic signal system shall be optimized by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District 3 of the Illinois Department of Transportation. The Contractor shall contact the Area Traffic Signal Operations Engineer at 815-434-8505 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 3 SCAT Guidelines, if available, except as note herein.

A listing of existing signal equipment, interconnect information and existing phasing/timing patterns may be obtained from the Department if available and as appropriate. The existing SCAT Report is available for review at the District Three office (if one exists) and if the Consultant provides blank rewritable compact disks, copies containing software runs for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall consult with the Area Traffic Signal Operations Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system; in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the re-optimization.

Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system. Proposed signal timing plan for the new or modified intersection(s) shall be forwarded to IDOT for review prior to implementation. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations.

Traffic counts shall be taken at the subject intersection after the traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Seven day/twenty-four hour automatic traffic recorder counts will be required and manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday, and if necessary, on the weekend. Additional manual turning movement counts may be necessary if heavy traffic flows exist during off peak hours. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, transit buses, and pedestrian/bicyclist movements.

As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controllers according to the current standard of District Three.

A Capacity Analysis shall be conducted at the subject intersection to determine its level of service and degree of saturation. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system with minor adjustments if necessary. Changes to the cycle lengths and offsets for the entire system may be required due to the addition/modification of the subject intersection. Both volume and occupancy shall be considered when developing the re-optimized timing program. Signal system optimization analyses shall be conducted utilizing PASSER II, TRANSYT 7F, SIGNAL 85, SYNCHRO 6.0 or other appropriate approved computer software.

The following traffic signal timings are required:

- a. Confirm that all signals have minimum 4 second yellow and 2 second red and check that the formula meets latest MUTCD edition.
- b. "Zero out" all density times.
- c. Confirm pedestrian times meet MUTCD latest edition (3.5 seconds).
- d. Confirm minimum green times are 6 seconds on left turn, 8 seconds on side streets, and 10 seconds on main street.
- e. Confirm all detection is "non-locking".

All the intersections shall be re-addressed according to the current standard of District Three. The proposed signal timing plan shall be forwarded to IDOT for review and approval seven days prior to the traffic signal turn on at the intersection. The timing plan shall be implemented at least two working days prior to the turn on of the traffic signal. The timing plan shall include a time-of-day program, which may be used as a back-up system. After downloading the system timings, the Consultant shall make fine tuning adjustments to the timing in the field to alleviate observed operating conditions and to enhance operations. The timing plans shall be re-evaluated after the signal has been turned on and traffic has had an opportunity to adjust to the new signal. Any necessary timing changes shall be made at that time with the approval of the Area Signal Engineer.

The following deliverables shall be required:

- Consultant shall furnish to IDOT a cover letter describing the extent of the re-optimization work performed.
- Consultant shall furnish an updated intersection graphic display for the subject intersection to IDOT and to IDOT's Traffic Signal Maintenance Contractor.
- Consultant shall furnish to IDOT one (1) copy of a technical memorandum for the optimized system. The technical memorandum shall include the following elements:
 - 1) Brief description of the project.
 - 2) Printed copies of the analysis output from Synchro (or other appropriate, approved optimization software file).
 - 3) Turning movement and automatic traffic recorder counts, capacity analyses for each count period, computer optimization analyses for each count period, proposed implementation plans and summaries including system description, analysis methodology, method of effectiveness comparison results and special recommendations and/or observations. The new report shall follow the format of the old report and shall incorporate all data from the old report which remains unchanged. Copies of the entire database including intersection displays and any other displays which the system software allows shall be furnished to the Department and to the Department's Traffic Signal Maintenance Contractor.
- Consultant shall furnish to IDOT two (2) CDs for the optimized system. The CDs shall include the following elements:
 - 1) Electronic copy of the technical memorandum in PDF format.
 - 2) Revised Synchro files (or other appropriate, approved optimization software file) including the new signal and the rest of the signals in the closed loop system.

- 3) Traffic counts conducted at the subject intersection.
- 4) New or updated intersection graphic display file for the subject intersection.
- 5) The CD shall be labeled with the IDOT system number and master locations, as well as the submittal date and the consultant logo. The CD case shall include a clearly readable label displaying the same information securely affixed to the side and front.

Method of Measurement. This work will be measured for payment per system as each. A system will consist of all the intersections listed above.

Basis of Payment. This work will be paid for at the contract unit price per each for OPTIMIZE TRAFFIC SIGNAL SYSTEM.

FIBER OPTIC CABLE IN CONDUIT

Add the following paragraph to the end of Article 871.04 of the Standard Specifications:

“The trench carrying the fiber optic cable conduit between intersections shall be marked with one polymer warning stake placed equidistant between handholes. The warning stake shall be a solid orange color with a warning sign at the top of the stake. The stake shall have a sign at the top stating BURIED FIBER OPTIC CABLE ↔ CALL VILLAGE OF BRADLEY 815-933-3715 BEFORE DIGGING. The sign shall have a nominal dimension of 14 inches (350 mm) by 3 inches (75 mm). The stake shall have a nominal dimension of 3 inches (75 mm) wide by 0.25 inch (6 mm) thick by 5.5 feet (1.67 m) long. Fifty percent of the stake length shall be buried leaving approximately 30 inches (760 mm) exposed above ground displaying the sign. The stake shall be of such design as to deflect upon impact by a vehicle and flex back to original position. The stake shall have a factory-attached anchor. The anchor shall catch soil around the stake and prevent unauthorized removal.”

This work will not be paid for separately, but shall be included in the cost of the fiber optic cable in conduit.

TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC, SPECIAL

This item consists of furnishing and installing a LOUVERED, FORMED PLASTIC TRAFFIC SIGNAL BACKPLATE as specified herein and all hardware accessories required to install on all proposed signal heads as described in Article 882 and 883.

The vacuum formed ABS plastic backplate shall have a nominal ½ inch deep back flange on all inside and outside edges. The backplate shall be louvered and provide openings (louvers) to all wind to penetrate and reduce wind loading. The louver openings shall cover a minimum of 20 percent of the surface area of the backplate. The entire front and side surface of the backplate including louver shall be manufactured so that it is imprinted with fluorescent yellow sheeting. The sheeting shall be Type AZ sheeting according to Article 1091.03 and applied to the preferred orientation for the maximum angularity according to the manufacture’s recommendation.

Basis of Payment. This item shall be paid for at the contract unit price each for TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC, SPECIAL.

PEDESTRIAN PUSH-BUTTON

In addition to the requirements of Section 888 of the Standard Specifications the following shall apply:

This work includes installing a pedestrian push-button extension whenever the push-button is more than 10 inches horizontally away from the face of the curb. All installations shall meet the requirements of the details included on the plans and applicable portions of these specifications.

Basis of Payment. This item shall be paid for at the contract unit price each for ACCESSIBLE PEDESTRIAN SIGNALS.

PEDESTRIAN SIGNAL HEAD AND SIGNAL HEAD, POLYCARBONATE, LED, 1 FACE, MAST ARM OR BRACKET MOUNTED, 3-SECTION OR 5-SECTION OR PEDESTRIAN SIGNAL HEADS

In addition to the requirements of Section 880 of the Standard Specifications the following shall apply:

This work includes having a 15 year warranty with warranty certification on all signal heads for this project. This work also includes having a manufacture snow cone on all red, yellow, and green signal heads for this project. Any other devices that have a proven record of removing snow when snow is compacted in the signal lenses and visors may be used on this project. All installations shall meet the requirements of the details included on the plans and applicable portions of these specifications.

Basis of Payment. Pedestrian Signal Head and Signal Head, Polycarbonate, LED, 1 Face, Mast Arm or Bracket Mounted, 3-Section or 5-Section or Pedestrian Signal Heads will be paid for at the contract unit price respectively per each for PEDESTRIAN SIGNAL HEAD AND SIGNAL HEAD, POLYCARBONATE, LED, 1 FACE, MAST ARM OR BRACKET MOUNTED, 3-SECTION OR 5-SECTION OR PEDESTRIAN SIGNAL HEADS.

REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE

This item consists of the removal of an existing flashing beacon installation at the intersection of Armour Road and Arthur Burch Drive. This work shall include removing the sign panels and posts, disconnecting, removing, and salvaging of all existing flashing beacons complete, including all controllers, junction boxes, conduit, mounting brackets, and appurtenances. Removal or abandonment of associated underground conduits and cables shall be completed to the satisfaction of the engineer. All removed beacons and signs shall become the property of IDOT and shall be delivered to the Kankakee Maintenance yard at 1455 Brookmont Avenue.

Disconnection and removal of the existing flashing beacon electric connection shall meet the requirements of Section 895 of the Standard Specifications and District Specifications for "Remove Existing Traffic Signal Equipment." This work shall consist of the complete removal of an existing flashing assembly and the backfilling of the holes created by the removal of the poles and restoration of the surface to match the adjoining area.

Basis of Payment. The removal of the existing flashing beacon installation will be paid for at the contract unit price per each for REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE.

SIGN REMOVAL

This work shall consist of furnishing all labor, materials, and equipment necessary to complete Sign Removal, and shall conform to section 724 of the Standard Specifications for Road and Bridge Construction.

The Contractor shall remove the existing signs and posts as specified in the contract plans. All removed signs and posts shall become the property of IDOT and shall be delivered to the Kankakee Maintenance yard at 1455 Brookmont Avenue.

Basis of Payment. This work shall be paid for at the contract unit price per each for SIGN REMOVAL.

DETECTOR LOOP, TYPE I

This item shall consist of replacing detector loops that have been removed by pavement milling operations at the intersections of Armour Road and Christine Drive and IL Route 50 & Commercial Entrance south of Armour Road and shall include furnishing, installing, and testing in accordance with Section 886 of the current "Standards Specifications for Road Bridge Construction."

This item shall include replacing any conduit stubs damaged during the surface grinding process. This shall also include any wire in conduit required to connect the loops.

Any 6'x20' Detector Loops shall have a minimum of three turns of wire, any 6'x6' Detector Loops shall have a minimum of four turns of wire. Detector Loops will be measured for payment along the sawed slot in the pavement only. The cables, from the end of the saw cut to the splice in the handhole, shall not be measured for payment since it is considered to be included in the cost of the Detector Loop.

Seven (7) days prior to any work that may affect the operation of the Detector Loops, and for signal timing adjustments to be made for the construction period and appropriate layout of Detector Loops for reinstallation, notice shall be given to Daniel Devine at the Illinois Department of Transportation, District 3 (815/434-8505).

This work will be paid for at the contract unit price per Foot for DETECTOR LOOP, Type I, which price shall include furnishing, installing all required components, and testing inductance to assure satisfactory operation.

TEMPORARY TRAFFIC SIGNAL INSTALLATION

This item shall consist of installing and maintaining temporary traffic signals at the locations shown on the plans and in accordance with Section 890 of the current "Standards Specifications for Road Bridge Construction."

Construction staging and associated traffic staging may require modifications to the temporary traffic signal installations. These modifications may consist of relocation, addition, or removal of traffic signal indications, signage, and other related items. Modifications to the video detection system may also be required. These modifications, as well as any other required modification to ensure the safe and efficient operation of the temporary traffic signal installations will be considered part of the pay item TEMPORARY TRAFFIC SIGNAL INSTALLATION and no additional payment will be made.

This work will be paid for at the contract unit price per Each for TEMPORARY TRAFFIC SIGNAL INSTALLATION, which price shall include furnishing and installing all required components to assure satisfactory operation.

HANDHOLE TO BE ADJUSTED

This work shall be in accordance with the applicable portions of the Section 814 of the Standard Specifications.

This work shall include the adjustment of an existing handhole to a proposed grade within an improved area. The contractor shall bring the grade of the handhole in agreement with Article 814.03 of the Standard Specifications.

Any existing conduit to be used shall be protected from damage during adjustment.

Any unsuitable material left over from the handhole adjustment shall be disposed of in accordance with Article 202.03 of the Standard Specifications.

This work shall be paid for at the contract unit price EACH for HANDHOLE TO BE ADJUSTED and shall include all labor and material to complete the adjustment. No additional compensation will be allowed.

COMBINATION LIGHTING CONTROLLER

Description. This work shall consist of furnishing and installing a photocell with integral surge arrester, 3-position selector switch (H-O-A), terminal/splice blocks, and 30 Amp lighting contactor (120V) in the traffic signal cabinet to control the operation of the combination lighting units.

A 120 Volt 20 Amp circuit breaker shall be installed inside the traffic signal controller connected to the main breaker, to serve the roadway lighting, per section 1068.01(e)(3) of the Standard Specifications. The circuit breaker shall be clearly labeled for lighting according to Article 1068.01(f) of the Standard Specifications.

Install all lighting components independent of the traffic signal components on one side of the cabinet and label as "LIGHTING". The under eave photocell shall be mounted on the traffic signal controller cabinet, per section 1068.01(e)(2) of the Standard Specifications. Furnish and install all wiring between components to make a fully functional lighting control system for the combination lights.

Basis of Payment. This work shall be paid for at the contract unit price per each for COMBINATION LIGHTING CONTROLLER, which shall be payment in full for all labor, materials, and equipment required to complete the installation.

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

This item shall consist of maintaining existing traffic signals at the intersections of Armour Road and Illinois Route 50, Armour Road and Locke Drive, Armour Road and Christine Drive and IL Route 50 and the Commercial Entrance south of Armour Road and in accordance with Section 850 of the current "Standards Specifications for Road Bridge Construction."

This work will be paid for at the contract unit price per Each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

EMERGENCY VEHICLE PRIORITY SYSTEM

This work shall consist of installing and testing of emergency vehicle preemption system components as shown on the plans, in accordance with manufacturer's specifications, and with Section 887 and Articles 1072 of the Standard Specifications. Where compatible, existing emergency vehicle preemption system components will be relocated from existing traffic signal equipment and used for proposed systems. Where existing equipment is not compatible, new emergency vehicle preemption system components will be supplied for this project and shall be of the latest version available and shall be fully compatible with the existing systems currently in use by the Village of Bradley. Furnishing and installing all necessary cable shall be included in the cost of the Emergency Vehicle Priority System. The electric cable shall meet the requirements of the system components being used as recommended by the manufacturer.

EMERGENCY VEHICLE PRIORITY SYSTEM shall be measured per each unit of the type and construction shown on the plans.

This work will be paid for at the contract unit price for EACH for EMERGENCY VEHICLE PRIORITY SYSTEM, which price shall include all labor necessary to relocate, to install complete, configure and test the work as specified.

LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET

This work shall consist of constructing or furnishing and installing a light pole foundation in accordance with applicable portions of Section 836 of the Standard Specifications for Road and Bridge Construction, as specified herein, and as shown on the contract plans.

Basis of Payment. This work will be paid for at the contract unit price per foot for LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET, which shall be payment in full for performing the work specified herein.

REMOVAL OF LIGHTING LUMINAIRE, NO SALVAGE

Description. This work shall consist of removing an existing roadway luminaire in accordance with applicable portions of Section 842 of the Standard Specifications for Road and Bridge Construction, and as specified herein.

Removal. The luminaire, associated components, wiring, and splices shall not be salvaged and shall be removed from the site and disposed of at the Contractor's expense. The pole shall not be left in place without a luminaire installed.

Basis of Payment. This work will be paid for at the contract unit price per each for REMOVAL OF LIGHTING LUMINAIRE, NO SALVAGE, which shall be payment in full for performing the work specified herein.

TEMPORARY LIGHTING SYSTEM

Description. This work shall consist of furnishing and installing a temporary lighting system and maintaining the existing, temporary, and proposed lighting systems. The Contractor shall provide all labor, material, and equipment necessary to furnish, install, maintain, and remove the temporary lighting system, and pay all utility charges associated with it. This work shall also include the relocation of temporary lighting facilities as necessary to accommodate the various stages of construction and removal of all temporary lighting facilities at the completion of the project. All work shall be performed in accordance with the plans, Standard Specifications for Road and Bridge Construction, as directed by the Engineer, and as specified herein.

The Contractor shall submit for the Engineer's approval, any modifications to the lighting design plan showing the proposed locations of all temporary poles for each stage of construction associated with each phase of the project. Any modifications by the Contractor to the lighting design shall meet the requirements of Department's BDE Design Manual Chapter 56 and no poles shall be installed until the Contractor's revised detailed lighting design plan is approved by the Engineer.

No temporary lighting facilities shall be purchased until the Contractor has submitted shop drawings and received the Engineer's approval to proceed. All temporary lighting facilities shall become property of the Contractor and shall be removed from the site at no additional cost. Any temporary lighting materials used by the Contractor which come from stock rather than being purchased new for this project shall require written approval by the Engineer.

The Contractor shall be responsible to maintain the existing, temporary, and proposed lighting systems throughout the project and no additional compensation will be allowed for this work, no matter how many times temporary and/or permanent lighting facilities are relocated. The Contractor shall provide the Engineer the names and phone numbers of two persons available for call-out work on the lighting system 24 hours per day, seven days per week.

Cable splicing, luminaire fusing, and surge protection shall be submitted for the Engineer's approval. All work required to keep the existing, temporary, and proposed lighting systems operational shall be at the Contractor's expense. No lighting circuit or portion thereof shall be removed from nighttime operation without the approval of the Engineer.

An inspection and approval by the Engineer shall take place before the temporary lighting system or modified system is approved for operation. Any damage to the existing lighting units and their circuitry as a result of the Contractor's workmanship shall be repaired or replaced to the satisfaction of the Engineer at no cost to the Department. All burnouts shall be replaced on a next day basis and temporary wiring shall be installed as necessary to keep all lights functioning every night.

The Contractor shall be responsible for all costs associated with providing service to the lighting system as the project progresses through the various stages of construction and circuit orientation changes. This shall include all costs of coordinating with the local utility for new and/or relocated electric service and metering.

The Contractor shall pay all energy charges associated with the temporary lighting system. Any energy charges which the Contractor would like to present to the Department for reimbursement shall be properly metered, billed, and prorated by the Contractor at no cost to the Department. The only energy charges which will be considered for reimbursement by the Department are those associated with existing or permanent lighting facilities that are identified and agreed to by the Engineer in writing at the time the Contractor's detailed lighting design plan is approved.

Basis of Payment. This work will be paid for at the contract unit price per lump sum for TEMPORARY LIGHTING SYSTEM, which shall be payment in full for performing the work specified herein.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

Description. This work shall consist of the removal and disposal of regulated substances according to Section 669 of the Standard Specifications as revised below.

Contract Specific Work Areas. The excavated soil and groundwater within the work areas listed below shall be managed as either "uncontaminated soil", hazardous waste, special waste, or non-special waste. For stationing, the lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit, whichever is less.

The following areas should be monitored by the Environmental Firm for soil contamination and workers protection.

Site 1625V2-1: CSL Behring, 1201 North Kinzie Avenue, Bradley, Kankakee County

- Station 160+00 RT to Station 161+00 RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminant of concern sampling parameter: Lead and manganese.
- Station 159+00 RT to Station 160+00 RT and STA 161+55 RT to 162+60 RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Lead.
- Station 165+35 RT to Station 166+15 RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). Contaminant of concern sampling parameter: Manganese.

Site 1625V2-3: Simply Self Storage, 1847 Armour Road, Bourbonnais, Kankakee County

- Station 154+70 LT to Station 155+90 LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(c). Contaminant of concern sampling parameter: Manganese.

Site 1625V2-12: Hobby Lobby, 1260 North Kinzie Avenue, Bradley, Kankakee County

- Station 173+55 RT to Station 174+60 RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminant of concern sampling parameter: Lead and manganese.
- Station 174+70 RT to Station 176+55 RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Lead.

Groundwater Management

- Excavation is anticipated to encounter impacted groundwater. Based on the COCs detected in groundwater (inorganics), it is anticipated that any groundwater encountered during construction will be managed within the excavation. Excess groundwater that cannot be managed within the excavation will be managed in accordance with Article 669.05(d). Contaminants of concern sample parameters: Metals, VOCs, SVOCs, sulfate/sulfide, and chloride.

Work Zones. Three distinct OSHA HAZWOPER work zones (exclusion, decontamination, and support) shall apply to projects adjacent to or within sites with documented leaking underground storage tank (LUST) incidents, or sites under management in accordance with the requirements of the Site Remediation Program (SRP), Resource Conservation and Recovery Act (RCRA), or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites: **None.**

Additional information on the above sites collected during the Phase I Engineering process is available through the District's Environmental Studies Unit (DESU).

ACCESSIBLE PEDESTRIAN SIGNALS (APS) (BDE)

Effective: April 1, 2003

Revised: January 1, 2022

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE)

Effective: November 2, 2006

Revised: August 1, 2017

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

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

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

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

- Where: CA = Cost Adjustment, \$.
BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).
BPI_L = 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_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V 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_V and undiluted emulsified asphalt will be considered to be 65% AC_V.
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_V.

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_{mb} = 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_L and BPI_P 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.

BLENDED FINELY DIVIDED MINERALS (BDE)

Effective: April 1, 2021

Revise the second paragraph of Article 1010.01 of the Standard Specifications to read:

“Different sources or types of finely divided minerals shall not be mixed or used alternately in the same item of construction, except as a blended finely divided mineral product according to Article 1010.06.”

Add the following article to Section 1010 of the Standard Specifications:

1010.06 Blended Finely Divided Minerals. Blended finely divided minerals shall be the product resulting from the blending or intergrinding of two or three finely divided minerals. Blended finely divided minerals shall be according to ASTM C 1697, except as follows.

- (a) Blending shall be accomplished by mechanically or pneumatically intermixing the constituent finely divided minerals into a uniform mixture that is then discharged into a silo for storage or tanker for transportation.
- (b) The blended finely divided mineral product will be classified according to its predominant constituent or the manufacturer’s designation and shall meet the chemical requirements of its classification. The other finely divided mineral constituent(s) will not be required to conform to their individual standards.”

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.”

**CONCRETE BOX CULVERTS WITH SKEWS > 30 DEGREES AND DESIGN FILLS ≤ 5 FEET
(BDE)**

Effective: April 1, 2012 Revised: July 1, 2016

Revise the second paragraph of Article 540.04 of the Standard Specifications to read:

“Unless otherwise noted on the plans, the Contractor shall have the option, when a cast-in-place concrete box culvert is specified, of constructing the box culvert using precast box culvert sections when the design cover is 6 in. (150 mm) minimum. The precast box culvert sections shall be designed for the same design cover shown on the plans for cast-in-place box culvert; shall be of equal or larger size opening, and shall satisfy the design requirements of ASTM C 1577.”

Add the following after the seventh paragraph of Article 540.06 of the Standard Specifications:

“Precast concrete box culverts with skews greater than 30 degrees and having design covers less than or equal to 5 ft are not covered by the standard design table shown in ASTM C 1577. The design table provided herein is provided to address this design range. The same notes, reinforcement configurations, clearances, and requirements of ASTM C 1577 apply to this special design table. A box designated 7 x 6 x 8 indicates a span of 7 ft, a rise of 6 ft, and top slab, bottom slab, walls and haunches of 8 in. unless otherwise noted on the tables.

3 ft x 2 ft x 4 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.17	1.10	0.30	0.10	0.28	0.17	0.92	0.14	
2<3	0.14	0.18	0.19	0.10					31
3-5	0.10	0.12	0.12	0.10					29

*top slab 7.0 in., bottom slab 6.0 in.

3 ft x 3 ft x 4 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.17	1.17	0.33	0.10	0.31	0.17	0.92	0.14	
2<3	0.10	0.22	0.22	0.10					31
3-5	0.10	0.14	0.14	0.10					31

*top slab 7.0 in., bottom slab 6.0 in.

4 ft x 2 ft x 5 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.21	0.88	0.26	0.12	0.28	0.18	0.89	0.14	
2<3	0.20	0.21	0.20	0.12					33
3-5	0.13	0.13	0.14	0.12					32

*top slab 7.5 in., bottom slab 6.0 in.

4 ft x 3 ft x 5 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.18	1.02	0.31	0.12	0.32	0.18	0.87	0.14	
2<3	0.16	0.25	0.24	0.12					38
3-5	0.12	0.16	0.17	0.12					34

*top slab 7.5 in., bottom slab 6.0 in.

4 ft x 4 ft x 5 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.18	1.08	0.34	0.12	0.34	0.18	0.86	0.14	
2<3	0.13	0.28	0.27	0.12					38
3-5	0.12	0.18	0.19	0.12					38

*top slab 7.5 in., bottom slab 6.0 in.

5 ft x 2 ft x 6 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.27	0.63	0.23	0.14	0.24	0.19	0.19	0.17	
2<3	0.25	0.22	0.20	0.14					37
3-5	0.17	0.15	0.15	0.14					35

*top slab 8.0 in., bottom slab 7.0 in.

5 ft x 3 ft x 6 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.20	0.72	0.27	0.14	0.29	0.19	.0.71	0.17	
2<3	0.21	0.26	0.25	0.14					37
3-5	0.14	0.18	0.18	0.14					35

*top slab 8.0 in., bottom slab 7.0 in.

5 ft x 4 ft x 6 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.19	0.78	0.30	0.14	0.31	0.19	0.70	0.17	
2<3	0.18	0.30	0.28	0.14					45
3-5	0.14	0.20	0.21	0.14					40

*top slab 8.0 in., bottom slab 7.0 in.

5 ft x 5 ft x 6 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.19	0.82	0.33	0.14	0.34	0.19	0.69	0.17	
2<3	0.16	0.33	0.32	0.14					45
3-5	0.14	0.22	0.23	0.14					45

*top slab 8.0 in., bottom slab 7.0 in.

6 ft x 2 ft x 7 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.33	0.51	0.21	0.17	0.23	0.19	0.61	0.17	
2<3	0.31	0.22	0.22	0.17					42
3-5	0.22	0.17	0.17	0.17					41

*top slab 8.0 in.

6 ft x 3 ft x 7 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.27	0.58	0.26	0.17	0.27	0.19	0.58	0.17	
2<3	0.26	0.27	0.27	0.17					41
3-5	0.18	0.19	0.20	0.17					39

*top slab 8.0 in.

6 ft x 4 ft x 7 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.25	0.64	0.30	0.17	0.30	0.19	0.57	0.17	
2<3	0.23	0.31	0.31	0.17					42
3-5	0.17	0.22	0.23	0.17					41

*top slab 8.0 in.

6 ft x 5 ft x 7 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in. / ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.23	0.68	0.33	0.17	0.32	0.19	0.56	0.17	
2<3	0.20	0.34	0.35	0.17					52
3-5	0.17	0.24	0.25	0.17					48

*top slab 8.0 in.

6 ft x 6 ft x 7 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.21	0.72	0.37	0.17	0.34	0.19	0.55	0.17	
2<3	0.18	0.37	0.38	0.17					52
3-5	0.17	0.26	0.28	0.17					52

*top slab 8.0 in.

7 ft x 2 ft x 8 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.38	0.60	0.26	0.19	0.22	0.19	0.75	0.19	
2<3	0.38	0.24	0.24	0.19					46
3-5	0.27	0.19	0.19	0.19					44

7 ft x 3 ft x 8 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.36	0.57	0.32	0.19	0.25	0.19	0.71	0.19	
2<3	0.33	0.29	0.30	0.19					44
3-5	0.23	0.21	0.21	0.19					42

7 ft x 4 ft x 8 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.34	0.61	0.37	0.19	0.27	0.19	0.70	0.19	
2<3	0.29	0.34	0.34	0.19					44
3-5	0.21	0.24	0.25	0.19					42

7 ft x 5 ft x 8 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.32	0.65	0.42	0.19	0.30	0.19	0.69	0.19	
2<3	0.26	0.37	0.38	0.19					49
3-5	0.19	0.27	0.28	0.19					46

7 ft x 6 ft x 8 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.29	0.69	0.46	0.19	0.32	0.19	0.67	0.19	
2<3	0.23	0.40	0.42	0.19					59
3-5	0.19	0.29	0.30	0.19					55

7 ft x 7 ft x 8 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.27	0.73	0.50	0.19	0.34	0.19	0.65	0.19	
2<3	0.21	0.43	0.45	0.19					59
3-5	0.19	0.31	0.33	0.19					59

8 ft x 2 ft x 8 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.47	0.50	0.29	0.19	0.23	0.19	0.61	0.19	
2<3	0.51	0.30	0.31	0.19					50
3-5	0.36	0.22	0.22	0.19					48

8 ft x 3 ft x 8 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.43	0.49	0.35	0.19	0.26	0.19	0.58	0.19	
2<3	0.45	0.36	0.37	0.19					48
3-5	0.32	0.26	0.27	0.19					45

8 ft x 4 ft x 8 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.40	0.52	0.40	0.19	0.29	0.19	0.57	0.19	
2<3	0.40	0.42	0.43	0.19					45
3-5	0.28	0.30	0.31	0.19					45

8 ft x 5 ft x 8 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.37	0.56	0.45	0.19	0.31	0.19	0.56	0.19	
2<3	0.36	0.46	0.47	0.19					48
3-5	0.26	0.33	0.34	0.19					45

8 ft x 6 ft x 8 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.34	0.61	0.49	0.19	0.33	0.19	0.56	0.19	
2<3	0.33	0.50	0.52	0.19					56
3-5	0.24	0.36	0.37	0.19					50

8 ft x 7 ft x 8 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.32	0.65	0.53	0.19	0.35	0.19	0.56	0.19	
2<3	0.30	0.53	0.56	0.19					65
3-5	0.22	0.38	0.40	0.19					61

8 ft x 8 ft x 8 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.30	0.69	0.57	0.19	0.36	0.19	0.55	0.19	
2<3	0.28	0.56	0.59	0.19					65
3-5	0.20	0.40	0.43	0.19					65

9 ft x 2 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.46	0.35	0.26	0.22	0.22	0.22	0.47	0.22	
2<3	0.58	0.32	0.32	0.22					55
3-5	0.41	0.23	0.23	0.22					52

9 ft x 3 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.42	0.35	0.32	0.22	0.23	0.22	0.47	0.22	
2<3	0.52	0.38	0.39	0.22					52
3-5	0.37	0.27	0.28	0.22					49

9 ft x 4 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.38	0.38	0.36	0.22	0.25	0.22	0.47	0.22	
2<3	0.47	0.44	0.45	0.22					52
3-5	0.33	0.31	0.32	0.22					49

9 ft x 5 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in. / ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.35	0.41	0.41	0.22	0.28	0.22	0.47	0.22	
2<3	0.43	0.49	0.50	0.22					49
3-5	0.30	0.35	0.36	0.22					49

9 ft x 6 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in. / ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.32	0.44	0.44	0.22	0.29	0.22	0.47	0.22	
2<3	0.39	0.53	0.54	0.22					55
3-5	0.28	0.38	0.39	0.22					52

9 ft x 7 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in. / ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.30	0.46	0.48	0.22	0.31	0.22	0.45	0.22	
2<3	0.36	0.56	0.59	0.22					64
3-5	0.26	0.40	0.42	0.22					58

9 ft x 8 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.28	0.49	0.52	0.22	0.33	0.22	0.45	0.22	
2<3	0.33	0.60	0.63	0.22					72
3-5	0.24	0.43	0.45	0.22					72

9 ft x 9 ft x 9 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.27	0.51	0.55	0.22	0.34	0.22	0.45	0.22	
2<3	0.31	0.63	0.66	0.22					72
3-5	0.23	0.45	0.48	0.22					72

10 ft x 2 ft x 10 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.46	0.29	0.24	0.24	0.24	0.24	0.34	0.24	
2<3	0.66	0.33	0.34	0.24					59
3-5	0.46	0.24	0.24	0.24					59

10 ft x 3 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.44	0.33	0.30	0.24	0.24	0.24	0.24	0.24	
2<3	0.59	0.40	0.41	0.24					59
3-5	0.42	0.29	0.29	0.24					56

10 ft x 4 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.40	0.36	0.35	0.24	0.24	0.24	0.24	0.24	
2<3	0.54	0.46	0.47	0.24					56
3-5	0.38	0.33	0.34	0.24					52

10 ft x 5 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.37	0.39	0.39	0.24	0.26	0.24	0.24	0.24	
2<3	0.49	0.51	0.52	0.24					52
3-5	0.35	0.36	0.38	0.24					52

10 ft x 6 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.34	0.42	0.43	0.24	0.28	0.24	0.42	0.24	
2<3	0.45	0.55	0.57	0.24					56
3-5	0.33	0.40	0.41	0.24					52

10 ft x 7 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.32	0.44	0.46	0.24	0.30	0.24	0.24	0.24	
2<3	0.42	0.59	0.62	0.24					59
3-5	0.31	0.42	0.45	0.24					56

10 ft x 8 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in. / ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.30	0.47	0.50	0.24	0.31	0.24	0.24	0.24	
2<3	0.39	0.63	0.66	0.24					75
3-5	0.29	0.45	0.48	0.24					66

10 ft x 9 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.28	0.49	0.53	0.24	0.33	0.24	0.24	0.24	
2<3	0.37	0.66	0.70	0.24					79
3-5	0.27	0.47	0.51	0.24					79

10 ft x 10 ft x 10 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.27	0.51	0.56	0.24	0.34	0.24	0.24	0.24	
2<3	0.35	0.69	0.74	0.24					79
3-5	0.26	0.50	0.54	0.24					79

11 ft x 2 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.50	0.27	0.26	0.26	0.26	0.26	0.26	0.26	
2<3	0.73	0.35	0.35	0.26					67
3-5	0.52	0.26	0.26	0.26					63

11 ft x 3 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.45	0.31	0.29	0.26	0.26	0.26	0.26	0.26	
2<3	0.67	0.42	0.43	0.26					63
3-5	0.47	0.30	0.31	0.26					60

11 ft x 4 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.41	0.34	0.33	0.26	0.26	0.26	0.26	0.26	
2<3	0.61	0.48	0.49	0.26					60
3-5	0.43	0.35	0.35	0.26					56

11 ft x 5 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.38	0.37	0.37	0.26	0.26	0.26	0.26	0.26	
2<3	0.56	0.53	0.54	0.26					56
3-5	0.40	0.38	0.39	0.26					56

11 ft x 6 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.35	0.40	0.40	0.26	0.26	0.26	0.26	0.26	
2<3	0.52	0.58	0.60	0.26					56
3-5	0.37	0.42	0.43	0.26					56

11 ft x 7 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.33	0.42	0.43	0.26	0.28	0.26	0.26	0.26	
2<3	0.48	0.62	0.64	0.26					60
3-5	0.35	0.44	0.47	0.26					56

11 ft x 8 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.31	0.45	0.47	0.26	0.30	0.26	0.26	0.26	
2<3	0.45	0.66	0.69	0.26					67
3-5	0.33	0.47	0.50	0.26					63

11 ft x 9 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.30	0.47	0.50	0.26	0.31	0.26	0.26	0.26	
2<3	0.43	0.69	0.73	0.26					85
3-5	0.31	0.49	0.53	0.26					70

11 ft x 10 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.28	0.49	0.53	0.26	0.33	0.26	0.26	0.26	
2<3	0.41	0.73	0.77	0.26					86
3-5	0.30	0.52	0.56	0.26					86

11 ft x 11 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.27	0.51	0.56	0.26	0.34	0.26	0.26	0.26	
2<3	0.39	0.76	0.81	0.26					86
3-5	0.29	0.55	0.59	0.26					86

12 ft x 2 ft x 12 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.51	0.29	0.29	0.29	0.29	0.29	0.29	0.29	
2<3	0.81	0.37	0.37	0.29					71
3-5	0.57	0.29	0.29	0.29					68

12 ft x 3 ft x 12 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.46	0.29	0.29	0.29	0.29	0.29	0.29	0.29	
2<3	0.74	0.44	0.44	0.29					68
3-5	0.53	0.32	0.32	0.29					64

12 ft x 4 ft x 12 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.42	0.33	0.31	0.29	0.29	0.29	0.29	0.29	
2<3	0.68	0.50	0.51	0.29					64
3-5	0.49	0.36	0.37	0.29					60

12 ft x 5 ft x 12 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.39	0.35	0.34	0.29	0.29	0.29	0.29	0.29	
2<3	0.63	0.55	0.56	0.29					64
3-5	0.45	0.40	0.41	0.29					60

12 ft x 6 ft x 12 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.36	0.38	0.38	0.29	0.29	0.29	0.29	0.29	
2<3	0.59	0.60	0.62	0.29					60
3-5	0.42	0.44	0.45	0.29					56

12 ft x 7 ft x 11 in.

Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.34	0.41	0.42	0.29	0.29	0.29	0.29	0.29	
2<3	0.55	0.65	0.67	0.29					60
3-5	0.40	0.47	0.49	0.29					60

12 ft x 8 ft x 12 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.32	0.43	0.45	0.29	0.29	0.29	0.29	0.29	
2<3	0.52	0.69	0.72	0.29					67
3-5	0.38	0.50	0.52	0.29					64

12 ft x 9 ft x 12 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.30	0.45	0.47	0.29	0.29	0.29	0.29	0.29	
2<3	0.49	0.73	0.76	0.29					75
3-5	0.36	0.52	0.56	0.29					68

12 ft x 10 ft x 12 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.29	0.48	0.50	0.29	0.30	0.29	0.29	0.29	
2<3	0.46	0.76	0.80	0.29					93
3-5	0.34	0.55	0.59	0.29					79

12 ft x 11 ft x 12 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.29	0.50	0.53	0.29	0.32	0.29	0.29	0.29	
2<3	0.44	0.79	0.85	0.29					91
3-5	0.33	0.57	0.62	0.29					79

12 ft x 12 ft x 12 in.									
Design Earth Cover, ft	Circumferential Reinforcement Areas, sq in./ ft								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.29	0.52	0.56	0.29	0.33	0.29	0.29	0.29	
2<3	0.43	0.83	0.89	0.29					93
3-5	0.32	0.60	0.65	0.29					93"

CONCRETE END SECTIONS FOR PIPE CULVERTS (BDE)

Effective: January 1, 2013

Revised: April 1, 2016

Description. This work shall consist of constructing cast-in-place concrete and precast concrete end sections for pipe culverts. These end sections are shown on the plans as Highway Standard 542001 or 542011. This work shall be according to Section 542 of the Standard Specifications except as modified herein.

Materials. Materials shall be according to the following Articles of Division 1000 – Materials of the Standard Specifications.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Precast Concrete End Sections (Note 2)	
(c) Coarse Aggregate (Note 3)	1004.05
(d) Structural Steel (Note 4)	1006.04
(e) Anchor Bolts and Rods (Note 5)	1006.09
(f) Reinforcement Bars	1006.10(a)
(g) Nonshrink Grout	1024.02
(h) Chemical Adhesive Resin System	1027
(i) Mastic Joint Sealer for Pipe	1055
(j) Hand Hole Plugs	1042.16

Note 1. Cast-in-place concrete end sections shall be Class SI, except the 14 day mix design shall have a compressive strength of 5000 psi (34,500 kPa) or a flexural strength of (800 psi) 5500 kPa and a minimum cement factor of 6.65 cwt/cu yd (395 kg/cu m).

Note 2. Precast concrete end sections shall be according to Articles 1042.02 and 1042.03(b)(c)(d)(e) of the Standard Specifications. The concrete shall be Class PC according to Section 1020, and shall have a minimum compressive strength of 5000 psi (34,000 kPa) at 28 days.

Joints between precast sections shall be produced with reinforced tongue and groove ends according to the requirements of ASTM C 1577.

Note 3. The granular bedding placed below a precast concrete end section shall be gradation CA 6, CA 9, CA 10, CA 12, CA 17, CA 18, or CA 19.

Note 4. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.

Note 5. The anchor rods for the culvert ties shall be according to the requirements of ASTM F 1554, Grade 105 (Grade 725).

CONSTRUCTION REQUIREMENTS

The concrete end sections may be precast or cast-in-place construction. Toe walls shall be either precast or cast-in-place, and shall be in proper position and backfilled according to the applicable paragraphs of Article 502.10 of the Standard Specifications prior to the installation of the concrete end sections. If soil conditions permit, cast-in-place toe walls may be poured directly against the soil. When poured directly against the soil, the clear cover of the sides and bottom of the toe wall shall be increased to 3 in. (75 mm) by increasing the thickness of the toe wall.

- (a) Cast-In-Place Concrete End Sections. Cast-in-place concrete end sections shall be constructed according to the requirements of Section 503 of the Standard Specifications and as shown on the plans.
- (b) Precast Concrete End Sections. When the concrete end sections will be precast, shop drawings detailing the slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval.

The excavation and backfilling for precast concrete end sections shall be according to the requirements of Section 502 of the Standard Specifications, except a layer of granular bedding at least 6 in. (150 mm) in thickness shall be placed below the elevation of the bottom of the end section. The granular bedding shall extend a minimum of 2 ft (600 mm) beyond each side of the end section.

Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 2/3 turn on one of the nuts. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut.

When individual, precast end sections are placed side-by-side for a multi-pipe culvert installation, a 3 in. (75 mm) space shall be left between adjacent end section walls and the space(s) filled with Class SI concrete.

Method of Measurement. This work will be measured for payment as each, with each end of each culvert being one each.

Basis of Payment. This work will be paid for at the contract unit price per each for CONCRETE END SECTION, STANDARD 542001 or CONCRETE END SECTION, 542011, of the pipe diameter and slope specified.

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

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

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be emailed to the Department at 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.

FUEL COST ADJUSTMENT (BDE)

Effective: April 1, 2009

Revised: August 1, 2017

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

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

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

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

(b) Fuel Usage Factors.

English Units		
Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

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

(c) Quantity Conversion Factors.

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

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

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

Where: CA = Cost Adjustment, \$
FPI_P = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)
FPI_L = Fuel Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/gal (\$/liter)
FUF = Fuel Usage Factor in the pay item(s) being adjusted
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

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

Basis of Payment. Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI_L and FPI_P in excess of five percent, as calculated by:

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

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

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).”

LUMINAIRES, LED (BDE)

Effective: April 1, 2019

Revised: January 1, 2022

Description. This work shall consist of furnishing and installing light emitting diode (LED) luminaires. Work shall be according to Sections 801, 821, and 1067 of the Standard Specifications, except as modified herein.

Submittals. In addition to the requirements listed in Article 801.05(a), submittals for LED luminaires shall include the following.

- Completed manufacturer’s luminaire ordering form with the full catalog number provided.
- Descriptive literature and catalog cuts for the luminaire, driver, and surge protective device.
- Lighting calculations generated with AGi32 software demonstrating compliance with the Luminaire Performance Table(s) shown in the contract. These calculations shall be performed to the following criteria: photopic units shall be used; calculations shall be performed to an accuracy matching the number of significant digits given in the Luminaire Performance Table(s); point-by-point illuminance, luminance, and veiling luminance ratios demonstrating the submitted luminaire meets the lighting metrics specified in the Luminaire Performance Table(s) using IES RP-8 methods.

Upon request by the Engineer, submittals for LED Luminaires shall also include any or all the following.

- IES file associated with each submitted luminaire in IES LM-63 format.
- TM-21 calculator spreadsheet (XLSX or PDF format) and if available, TM-28 report for the specified luminaire or luminaire family. Both reports shall be for 50,000 hours at an ambient temperature of 77 °F (25 °C).
- LM-79 report with National Voluntary Laboratory Accreditation Program (NVLAP) current at the time of testing in PDF format inclusive of the following: isofootcandle diagram with half candela contour and maximum candela point; polar plots through maximum plane and maximum cone; coefficient of utilization graph; candela table; and spectral distribution graph and chromaticity diagram.
- LM-80 report for the specified LED package in PDF format and if available, LM-84 report for the specified luminaire or luminaire family in PDF format. Both reports shall be conducted by a laboratory with NVLAP certification current at the time of testing.
- In Situ Temperature Measurement Test (ISTMT) report for the specified luminaire or luminaire family in PDF format.

- Vibration test report in accordance with ANSI C136.31 in PDF format.
- ASTM B117/ASTM D1654 (neutral salt spray) test and sample evaluation report in PDF format.
- ASTM G154 (ASTM D523) gloss test report in PDF format.
- LED drive current, total luminaire input wattage, and current over the operating voltage range at an ambient temperature of 77 °F (25 °C).
- Power factor (pf) and total harmonic distortion (THD) at maximum and minimum supply and at nominal voltage for the dimmed states of 70%, 50%, and 30% full power.
- Ingress protection (IP) test reports, conducted according to ANSI C136.25 requirements, for the driver and optical assembly in PDF format.
- Installation, maintenance, and cleaning instructions in PDF format, including recommendations on periodic cleaning methods.
- Documentation in PDF format that the reporting laboratory is certified to perform the required tests.

Roadway Luminaires. Revise Article 821.02(d) to read.

“(d) Light Source1067.06”

Revise the third paragraph of Article 821.03 to read.

“Each luminaire driver and/or driver arrangement shall be checked to ensure compatibility with the project power supply.”

Replace the fifth paragraph of Article 821.03 with the following.

“No luminaire shall be installed before it is approved. When independent luminaire testing is required, full approval will not be given until complete test results which demonstrate compliance with the contract documents have been reviewed and accepted by the Engineer. Independent luminaire testing will be required, and shall be conducted, according to Article 1067.01(k)”.

Revise the last paragraph of Article 821.03 to read.

“When installing or adjusting the luminaire, care shall be taken to avoid touching the lenses or allowing contaminants to be deposited on any part of the optical assembly. Each lens shall be free of all dirt, smudges, etc. Should the luminaire require cleaning, the luminaire manufacturer’s cleaning instructions shall be strictly followed.”

Revise Article 821.08 to read.

“**821.08 Basis of Payment.** This work will be paid for at the contract unit price per each for LUMINAIRE, LED, ROADWAY, of the output designation specified; LUMINAIRE, LED, HIGHMAST, of the output designation specified; LUMINAIRE, LED, UNDERPASS,

WALLMOUNT, of the output designation specified; LUMINAIRE, LED, UNDERPASS, SUSPENDED, of the output designation specified; LUMINAIRE, LED, SIGN LIGHTING, of the output designation specified.

Luminaires. Revise Articles 1067.01 through 1067.06 to read.

“1067.01 General. The size, weight, and shape of the luminaire shall be designed so as not to incite detrimental vibrations in its respective pole and it shall be compatible with the pole and arm. All electrical and electronic components of the luminaire shall comply with the requirements of Restriction of Hazardous Materials (RoHS) regulations. The luminaire shall be listed for wet locations by an NRTL and shall meet the requirements of UL 1598 and UL 8750.

- (a) Labels. An internal label shall be provided indicating the luminaire is suitable for wet locations and indicating the luminaire is an NRTL listed product to UL1598 and UL8750. The internal label shall also comply with the requirements of ANSI C136.22.

An external label consisting of two black characters on a white background with the dimensions of the label and the characters as specified in ANSI C136.15 for HPS luminaires. The first character shall be the alphabetical character representing the initial lumen output as specified in Table 1 of Article 1067.06(c). The second character shall be the numerical character representing the transverse light distribution type as specified in IES RP-8 (i.e. Types 1, 2, 3, 4, or 5).

- (b) Surge Protection. The luminaire shall comply the requirements of ANSI C136.2 for electrical transient immunity at the “Extreme” level (20KV/10KA) and shall be equipped with a surge protective device (SPD) that is UL1449 compliant with indicator light. An SPD failure shall open the circuit to protect the driver.
- (c) Optical Assembly. The optical assembly shall have an IP66 or higher rating in accordance with ANSI C136.25. The circuiting of the LED array shall be designed to minimize the effect of individual LED failures on the operation of other LEDs. All optical components shall be made of glass or a UV stabilized, non-yellowing material.
- (d) Housing. All external surfaces shall be cleaned in accordance with the manufacturer’s recommendations and be constructed in such a way as to discourage the accumulation of water, ice, and debris.
- (e) Driver. The driver shall be integral to the luminaire and shall be capable of receiving indefinite open and short circuit output conditions without damage.

The driver shall incorporate the use of thermal foldback circuitry to reduce output current under abnormal driver case temperature conditions and shall be rated for a lifetime of 100,000 hours at an ambient temperature exposure of 77 °F (25 °C) to the luminaire. If the driver has a thermal shut down feature, it shall not turn off the LEDs when operated at 104 °F (40 °C) or less.

The driver shall have an input voltage range of 120 to 277 volts (± 10%) or 347 to 480 volts (± 10%) according to the contract documents. When the driver is operating within the rated input voltage range and in an un-dimmed state, the power factor measurement shall be not less than 0.9 and the THD measurement shall be no greater than 20%.

The driver shall meet the requirements of the FCC Rules and Regulations, Title 47, Part 15 for Class A devices with regard to electromagnetic compatibility. This shall be confirmed through the testing methods in accordance with ANSI C63.4 for electromagnetic interference.

The driver shall be dimmable using the protocol listed in the Luminaire Performance Table shown in the contract.

- (f) Photometric Performance. The luminaire shall be IES LM-79 tested by a laboratory holding accreditation from the NVLAP for IES LM-79 testing procedures. At a minimum the LM-79 report shall include a backlight/uplight/glare (BUG) rating and a luminaire classification system (LCS) graph showing lumen values and percent lumens by zone as described in IES RP-8. The uplight of the BUG rating shall be U=0.

The luminaire shall also meet the requirements of the Luminaire Performance Table shown in the contract.

- (g) Finish. The luminaire shall have a baked acrylic enamel finish. The color of the finish shall be gray, bronze, or black to match the pole or tower on which the luminaire is mounted.

The finish shall have a rating of six or greater according to ASTM D1654, Section 8.0 Procedure A – Evaluation of Rust Creepage for Scribed Samples after exposure to 1000 hours of testing according to ASTM B117 for painted or finished surfaces under environmental exposure.

The luminaire finish shall have less than or equal to 30% reduction of gloss according to ASTM D523 after exposure of 500 hours to ASTM G154 Cycle 6 QUV® accelerated weathering testing.

- (h) Hardware. All hardware shall be stainless steel or of other corrosion resistant material approved by the Engineer.

- (i) Vibration Testing. All luminaires, with the exception of underpass and sign lighting luminaires, shall be subjected to and pass vibration testing requirements at “3G” minimum zero to peak acceleration in accordance with ANSI C136.31 requirements using the same luminaire. To be accepted, the luminaire housing, hardware, and each individual component shall pass this test with no noticeable damage and the luminaire must remain fully operational after testing.

- (j) Wiring. All wiring in the luminaire shall be rated for operation at 600V, 221 °F (105 °C).

- (k) Independent Luminaire Testing. When a contract has 30 or more luminaires of the same manufacturer’s catalog number, that luminaire shall be independently tested to verify it will meet the contract requirements. The quantity of luminaires requiring testing shall be one luminaire for the first 30 plus one additional luminaire for each additional 50 luminaires of that catalog number. Testing is not required for temporary lighting luminaires.

Prior to testing the Contractor shall propose a properly accredited laboratory and a qualified independent witness, submitting their qualifications to the Engineer for approval.

After approval, the Contractor shall coordinate the testing and pay all associated costs, including travel expenses, for the independent witness.

- (1) Independent Witness. The independent witness shall select from the project luminaires at the manufacturer's facility the luminaires for testing. In all cases, the selection of luminaires shall be a random selection from the entire completed lot of luminaires required for the contract. Selections from partial lots will not be allowed. The independent witness shall mark each sample luminaire's shipping carton with the IDOT contract number and a unique sample identifier.

At the time of random selection, the independent witness shall inspect the luminaire(s) for compliance with all physical, mechanical, and labeling requirements for luminaires according to Sections 821 and 1067. If deficiencies are found during the physical inspection, the Contractor shall have all luminaires of that manufacturer's catalog number inspected for the identified deficiencies and shall correct the problem(s) where found. Random luminaire selection and physical inspection must then be repeated. When the physical inspection is successfully completed, the independent witness shall mark the project number and sample identifier on the interior housing and driver of the luminaires and have them shipped to the laboratory.

The independent witness shall be present when testing is approved to be performed by the luminaire manufacturer. If the tests are performed by a laboratory independent of the luminaire manufacturer, distributor, and Contractor, the independent witness need not be present during the testing.

- (2) Laboratory Testing. Luminaires shall be tested at an NVLAP accredited laboratory approved for each of the required tests. The testing shall include photometric, colorimetric, and electrical testing according to IES LM-79. Colorimetric values shall be determined from total spectral radiant flux measurements using a spectroradiometer. Photometric testing shall be according to IES recommendations and as a minimum, shall yield an isofootcandle chart, with max candela point and half candela trace indicated, an isocandela diagram, maximum plane and maximum cone plots of candela, a candlepower table (house and street side), a coefficient of utilization chart, a luminous flux distribution table, BUG rating report, and complete calculations based on specified requirements and test results.

All testing shall cover the full spherical light output at a maximum of 5 degree intervals at the vertical angles. The vertical angles shall run from 0 to 180 degrees. There shall be a minimum of 40 lateral test planes listed in Fig. 1 of IES LM-31 plus the two planes containing the maximum candela on the left and right sides of the luminaire axis. Before testing, the luminaire when mounted on the goniometer shall be scanned for vertical and horizontal angles of maximum candela and these planes included in the test. The luminaire shall be checked for a bi-symmetric light distribution. Individual tests must be conducted for each hemisphere, quadrant, and left/right sides.

The results for each photometric and colorimetric test performed shall be presented in a standard IES LM-79 report that includes the contract number, sample identifier, and the outputs listed above. The calculated results for each sample luminaire shall meet or exceed the contract specified levels in the luminaire performance table(s). The laboratory shall mark its test identification number on the interior of each sample luminaire.

Electrical testing shall be in according to IES LM-79 as well as NEMA and ANSI standards. The report shall list luminaire characteristics including input amperes, watts, power factor, total harmonic distortion, and LED driver current for full and partial power.

- (3) Summary Test Report. The summary test report shall consist of a narrative documenting the test process, highlight any deficiencies and corrective actions, and clearly state which luminaires have met or exceeded the test requirements and may be released for delivery to the jobsite. Photographs shall also be used as applicable to document luminaire deficiencies and shall be included in the test report. The summary test report shall include the Luminaire Physical Inspection Checklist (form BDE 5650), photometric and electrical test reports, and point-by-point photometric calculations performed in AGI32 sorted by luminaire manufacturers catalog number. All test reports shall be certified by the independent test laboratory's authorized representative or the independent witness, as applicable, by a dated signature on the first page of each report. The summary test reports shall be delivered to the Engineer and the Contractor as an electronic submittal. Hard copy reports shall be delivered to the Engineer for record retention.
- (4) Approval of Independent Testing Results. Should any of the tested luminaires fail to satisfy the specifications and perform according to approved submittal information, all luminaires of that manufacturers catalog number shall be deemed unacceptable and shall be replaced by alternate equipment meeting the specifications. The submittal and testing process shall then be repeated in its entirety. The Contractor may request in writing that unacceptable luminaires be corrected in lieu of replacement. The request shall identify the corrections to be made and upon approval of the request, the Contractor shall apply the corrections to the entire lot of unacceptable luminaires. Once the corrections are completed, the testing process shall be repeated, including selection of a new set of sample luminaires. The number of luminaires to be tested shall be the same quantity as originally tested.

The process of retesting, correcting, or replacing luminaires shall be repeated until luminaires for each manufacturers catalog number are approved for the project. Corrections and re-testing shall not be grounds for additional compensation or extension of time. No luminaires shall be shipped from the manufacturer to the jobsite until all luminaire testing is completed and approved in writing.

Submittal information shall include a statement of intent to provide the testing as well as a request for approval of the chosen independent witness and laboratory. All summary test reports, written reports, and the qualifications of the independent witness and laboratory shall be submitted for approval to the Engineer with a copy to the Bureau of Design and Environment, 2300 S Dirksen Parkway, Room 330 Springfield, IL 62764.

1067.02 Roadway Luminaires. Roadway luminaires shall be according to Article 1067.01 and the following.

The luminaire shall be horizontally mounted and shall be designed to slip-fit on a 2-3/8 in. (60 mm) outside diameter pipe arm with a stop to limit the amount of insertion to 7 in. (180 mm). It shall not be necessary to remove or open more than the access door to mount the luminaire.

The effective projected area (EPA) of the luminaire shall not exceed 1.6 sq ft (0.149 sq m) and the weight, including accessories, shall not exceed 40 lb (18.14 kg). If the weight of the luminaire is less than 20 lb (9.07 kg), weight shall be added to the mounting arm or a supplemental vibration damper installed as approved by the Engineer.

The luminaire shall be equipped with both internal and external leveling indicators. The external leveling indicator shall be clearly visible in daylight to an observer directly under the luminaire at a mounting height of 50 ft (15.2 m).

The luminaire shall be fully prewired to accept a seven-pin, twist-lock receptacle that is compliant with ANSI C136.41. All receptacle pins shall be connected according to TALQ Consortium protocol.

The luminaire shall be provided with an installed shorting cap that is compliant with ANSI C136.10.

1067.03 Highmast Luminaires. Highmast luminaires shall be according to Article 1067.01 and the following.

The luminaire shall be horizontally mounted and shall be designed and manufactured for highmast tower use. The EPA of the luminaire shall not exceed 3.0 sq ft (0.279 sq m) and the weight, including accessories, shall not exceed 85 lb (38.6 kg).

The optical assembly shall be capable of being rotated 360 degrees. A vernier scale shall be furnished on the axis of rotation for aiming the luminaire in relation to its mounting tenon arm. The scale shall be graduated in 5 degree increments or less. The luminaire shall be clearly marked at the vernier as to 'house-side' and 'street-side' to allow proper luminaire orientation.

1067.04 Underpass Luminaires. Underpass luminaries shall be according to Article 1067.01 and the following.

The underpass luminaire shall be complete with all supports, hardware, and appurtenant mounting accessories. The underpass luminaire shall be suitable for lighting a roadway underpass at an approximate mounting height of 15 ft (4.5 m) from a position suspended directly above the roadway edge of pavement or attached to a wall or pier. The underpass luminaire shall meet the requirements of ANSI C136.27.

It shall not be necessary to remove more than the cover, reflector and lens to mount the luminaire. The unit shall be suitable for highway use and shall have no indentations or crevices in which dirt, salt, or other corrosives may collect.

- (a) Housing. The housing and lens frame shall be made of die cast aluminum or 16 gauge (1.5 mm) minimum thickness Type 304 stainless steel. All seams in the housing enclosure shall be welded by continuous welds.

The housing shall have an opening for installation of a 3/4 in. (19 mm) diameter conduit.

- (b) Lens and Lens Frame. The frame shall not overlap the housing when closed. The luminaire shall have a flat glass lens to protect the LEDs from dirt accumulation or be designed to prevent dirt accumulation. The optic assembly shall be rated IP 66 or higher.

1067.05 Sign Lighting Luminaires. Sign lighting luminaires shall be suitable for lighting overhead freeway and expressway guide signs; and shall be according to Article 1067.01.

1067.06 Light Sources. The light sources in all luminaires shall be LED according to Article 1067.01 and the following.

- (a) The light source shall be according to ANSI C136.37 for solid state light sources used in roadway and area lighting.
- (b) The light source shall have a minimum color rendering index (CRI) of 70 and a nominal correlated color temperature (CCT) of 4000 K.
- (c) The rated initial luminous flux (lumen output) of the light source, as installed in the luminaire, shall be according to the following table for each specified output designation.

Output Designations and Initial Luminous Flux		<i>(for information only)</i>
Output Designation	Initial Luminous Flux (lm)	Approximate High Pressure Sodium (HPS) Equivalent Wattage
A	2,200	35 (Low Output)
B	3,150	50 (Low Output)
C	4,400	70 (Low Output)
D	6,300	100 (Low Output)
E	9,450	150 (Low Output)
F	12,500	200 (Med Output)
G	15,500	250 (Med Output)
H	25,200	400 (Med Output)
I	47,250	750 (High Output)
J	63,300	1,000 (High Output)
K	80,000+	1,000+ (High Output)

Luminaires with an initial luminous flux less than or greater than the values listed in the above table may be acceptable if they meet the requirements given in the Luminaire Performance Table shown in the contract and approved by the Engineer.”

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 Device1102.02”

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 ≥ 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.”

PORTLAND CEMENT CONCRETE – HAUL TIME (BDE)

Effective: July 1, 2020

Revise Article 1020.11(a)(7) of the Standard Specifications to read:

“(7) Haul Time. Haul time shall begin when the delivery ticket is stamped. The delivery ticket shall be stamped no later than five minutes after the addition of the mixing water to the cement, or after the addition of the cement to the aggregate when the combined aggregates contain free moisture in excess of two percent by weight (mass). If more than one batch is required for charging a truck using a stationary mixer, the time of haul shall start with mixing of the first batch. Haul time shall end when the truck is emptied for incorporation of the concrete into the work. The maximum haul time shall be as follows.

Concrete Temperature at Point of Discharge, °F (°C)	Maximum Haul Time ^{1/} (minutes)	
	Truck Mixer or Truck Agitator	Nonagitator Truck
50 - 64 (10 - 17.5)	90	45
> 64 (> 17.5) - without retarder	60	30
> 64 (> 17.5) - with retarder	90	45

1/ To encourage start-up testing for mix adjustments at the plant, the first two trucks will be allowed an additional 15 minutes haul time whenever such testing is performed.

For a mixture which is not mixed on the jobsite, a delivery ticket shall be required for each load. The following information shall be recorded on each delivery ticket: (1) ticket number; (2) name of producer and plant location; (3) contract number; (4) name of Contractor; (5) stamped date and time batched; (6) truck number; (7) quantity batched; (8) amount of admixture(s) in the batch; (9) amount of water in the batch; and (10) Department mix design number.

For concrete mixed in jobsite stationary mixers, the above delivery ticket may be waived, but a method of verifying the haul time shall be established to the satisfaction of the Engineer.”

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004

Revised: January 1, 2022

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

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, welded reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of \$10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price,. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Welded Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 – 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 – 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 – 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 – 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 – 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 – 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 – 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

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%”

SURFACE TESTING OF PAVEMENTS – IRI (BDE)

Effective: January 1, 2021

Revised: January 1, 2022

Description. This work shall consist of testing the ride quality of the finished surface of pavements, according to Illinois Test Procedure 701, “Ride Quality Testing Using the International Roughness Index (IRI)”. Work shall be according to Sections 406, 407, or 420 of the Standard Specifications, except as modified herein.

Hot-Mix Asphalt (HMA) Overlays

Add Article 406.03(n) to the Standard Specifications:

“(n) Pavement Surface Grinding Equipment..... 1101.04”

Revise Article 406.11 of the Standard Specifications to read:

“406.11 Surface Tests. Prior to pavement improvements, the Engineer will measure the smoothness of the existing high-speed mainline pavement. The Contractor shall measure the smoothness of the finished high-speed mainline, low-speed mainline, and miscellaneous pavements within seven days of paving. Testing shall be performed in the presence of the Engineer and according to Illinois Test Procedure 701. The pavement will be identified as high-speed mainline, low-speed mainline, or miscellaneous as follows.

(a) Test Sections

- (1) High-Speed Mainline Pavement. High-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed limit greater than 45 mph. These sections shall be tested with an inertial profiling system (IPS).
- (2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed limit of 45 mph or less. These sections shall be tested with an IPS and will be analyzed using the rolling 16 ft (5 m) straightedge simulation in ProVAL.
- (3) Miscellaneous Pavement. Miscellaneous pavement includes segments that either cannot readily be tested by an IPS or conditions beyond the control of the contractor preclude the achievement of smoothness levels typically achievable with mainline pavement construction. This may include the following examples or as determined by the Engineer.
 - (a) Pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1,000 ft (300 m) and the pavement within the superelevation transition of such curves;
 - (b) Pavement on vertical curves having a length less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grade greater than or equal to 3 percent as may occur on urban ramps or other constricted-space facilities;
 - (c) The first and last 50 ft (15 m) of a pavement section where the Contractor is not responsible for the adjoining surface;
 - (d) Intersections and the 25 ft (7.6 m) before and after an intersection or end of radius return;
 - (e) Variable width pavements;
 - (f) Side street returns, to the end of radius return;
 - (g) Crossovers;
 - (h) Connector pavement from the mainline pavement expansion joint to the bridge approach slab;
 - (i) Bridge approach slab;
 - (j) Pavement that must be constructed in multiple short segments, typically defined as 600 ft (180 m) or less;
 - (k) Pavement within 25 ft (7.6 m) of manholes, utility structures, or other appurtenances;
 - (l) Turn lanes; and

(m) Pavement within 5 ft (1.5 m) of jobsite sampling locations for HMA volumetric testing that fall within the wheel path.

Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge.

- (4) International Roughness Index (IRI). An index computed from a longitudinal profile measurement using a quarter-car simulation at a simulation speed of 50 mph (80 km/h).
- (5) Mean Roughness Index (MRI). The average of the IRI values for the right and left wheel tracks.
- (6) Areas of Localized Roughness (ALR). Isolated areas of roughness, which can cause significant increase in the calculated MRI for a given subplot.
- (7) Lot. A lot will be defined as a continuous strip of pavement 1 mile (1,600 m) long and one lane wide. When the length of a continuous strip of pavement is less than 1 mile (1,600 m), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length, but will not be considered as a discontinuity and the numbering of sublots will not restart. The limits of the structure shall include the entire length between the outside ends of both connector pavements.
- (8) Sublot. Lots will be divided into 0.1 mile (160 m) sublots. A partial subplot greater than or equal to 264 ft (80 m) resulting from an interruption in the pavement will be subject to the same evaluation as a whole subplot. Partial sublots less than 264 ft (80 m) shall be included with the previous subplot for evaluation purposes.

(b) Corrective Work. Corrective work shall be completed according to the following.

- (1) High-Speed Mainline Pavement. For high-speed mainline pavement, any 25 ft (7.6 m) interval with an ALR in excess of 150 in./mile (2,400 mm/km) will be identified by the Engineer and shall be corrected by the Contractor. Any subplot having a MRI greater than MRI_D , including ALR, shall be corrected to reduce the MRI to the MRI_F , or replaced at the Contractor's option.
- (2) Low-Speed Mainline Pavement. Bumps in low-speed mainline pavement which exceed the 5/16 in. (8 mm) tolerance using a simulated 16 ft (5 m) straightedge will be identified by the Engineer and shall be corrected by the Contractor.
- (3) Miscellaneous Pavements. Bumps in miscellaneous pavement which exceed the 5/16 in. (8 mm) tolerance on a 16 ft (5 m) straightedge will be identified by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed with pavement surface grinding equipment or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area normal to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the subplot(s) shall be retested. The Contractor shall furnish the data and reports to the Engineer within 2 working days after

corrections are made. If the MRI and/or ALR still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

- (c) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each subplot of high-speed mainline pavement per the Smoothness Assessment Schedule. Assessments will be based on the MRI of each subplot prior to performing any corrective work unless the Contractor has chosen to remove and replace the subplot. For sublots that are replaced, assessments will be based on the MRI determined after replacement.

The upper MRI thresholds for high-speed mainline pavement are dependent on the MRI of the existing pavement before construction (MRI_0) and shall be determined as follows.

Upper MRI Thresholds ^{1/}	MRI Thresholds (High-Speed, HMA Overlay)	
	$MRI_0 \leq 125.0$ in./mile ($\leq 1,975$ mm/km)	$MRI_0 > 125.0$ in./mile ^{1/} ($> 1,975$ mm/km)
Incentive (MRI_I)	45.0 in./mile (710 mm/km)	$0.2 \times MRI_0 + 20$
Full Pay (MRI_F)	75.0 in./mile (1,190 mm/km)	$0.2 \times MRI_0 + 50$
Disincentive (MRI_D)	100.0 in./mile (1,975 mm/km)	$0.2 \times MRI_0 + 75$

1/ MRI_0 , MRI_I , MRI_F , and MRI_D shall be in in./mile for calculation.

Smoothness assessments for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, HMA Overlay)	
Mainline Pavement MRI Range	Assessment Per Sublot ^{1/}
$MRI \leq MRI_I$	$+ (MRI_I - MRI) \times \$33.00$ ^{2/}
$MRI_I < MRI \leq MRI_F$	$+ \$0.00$
$MRI_F < MRI \leq MRI_D$	$- (MRI - MRI_F) \times \$20.00$
$MRI > MRI_D$	$- \$500.00$

1/ MRI , MRI_I , MRI_F , and MRI_D shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$500.00.

Smoothness assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.”

Hot-Mix Asphalt (HMA) Pavement (Full-Depth)

Revise the first paragraph of Article 407.03 of the Standard Specifications to read:

“**407.03 Equipment.** Equipment shall be according to Article 406.03.”

Revise Article 407.09 of the Standard Specifications to read:

“407.09 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The testing of the existing pavement prior to improvements shall not apply and the smoothness assessment for high-speed mainline pavement shall be determined according to the following table.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, Full-Depth HMA)	
Mainline Pavement MRI, in./mile (mm/km)	Assessment Per Sublot ^{1/}
≤ 45.0 (710)	+ (45 – MRI) × \$80.00 ^{2/}
> 45.0 (710) to 75.0 (1,190)	+ \$0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × \$30.00
> 100.0 (1,580)	– \$750.00

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$1,200.00.”

Portland Cement Concrete Pavement

Delete Article 420.03(i) of the Standard Specifications.

Revise Article 420.03(j) of the Standard Specifications to read:

“(i) Coring Machine (Note 1)”

Revise Article 420.10 of the Standard Specifications to read:

“420.10 Surface Tests. The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows.

The testing of the existing pavement prior to improvements shall not apply. The Contractor shall measure the smoothness of the finished surface of the pavement after the pavement has attained a flexural strength of 250 psi (3,800 kPa) or a compressive strength of 1,600 psi (20,700 kPa).

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

(a) Corrective Work. No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.18 at no additional cost to the Department.

Pavement corrected by removal and replacement, shall be corrected in full panel sizes.

(b) Smoothness Assessments. Smoothness assessment for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, PCC)	
Mainline Pavement MRI, in./mile (mm/km) ^{3/}	Assessment Per Sublot ^{1/}
≤ 45.0 (710)	+ (45 – MRI) × \$120.00 ^{2/}
> 45.0 (710) to 75.0 (1,190)	+ \$0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × \$45.00
> 100.0 (1,580)	– \$1,125.00

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$1,800.00.

3/ If pavement is constructed with traffic in the lane next to it, then an additional 10 in./mile will be added to the upper thresholds.”

Removal of Existing Pavement and Appurtenances

Revise the first paragraph of Article 440.04 of the Standard Specifications to read:

“**440.04 HMA Surface Removal for Subsequent Resurfacing.** The existing HMA surface shall be removed to the depth specified on the plans with a self-propelled milling machine. The removal depth may be varied slightly at the discretion of the Engineer to satisfy the smoothness requirements of the finished pavement. The temperature at which the work is performed, the nature and condition of the equipment, and the manner of performing the work shall be such that the milled surface is not torn, gouged, shoved or otherwise damaged by the milling operation. Sufficient cutting passes shall be made so that all irregularities or high spots are eliminated to the satisfaction of the Engineer. When tested with a 16 ft (5 m) straightedge, the milled surface shall have no surface variations in excess of 3/16 in. (5 mm).”

TRAINING SPECIAL PROVISIONS (BDE)

Effective: October 15, 1975

Revised: September 2, 2021

This Training Special Provision supersedes Section 7b of the Special Provision entitled “Specific Equal Employment Opportunity Responsibilities,” and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor’s equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 4. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this Training Special

Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee it employs on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

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

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

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

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

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

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

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

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

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

For contracts with an awarded contract value of \$500,000 or more, the Contractor is required to comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules to the extent permitted by Section 20-20(g). For federally funded projects, the number of trainees to be trained under this contract, as stated in the Training Special Provisions, will be the established goal for the Illinois Works Apprenticeship Initiative 30 ILCS 559/20-20(g). The Contractor shall make a good faith effort to meet this goal. For federally funded projects, the Illinois Works Apprenticeship Initiative will be implemented using the FHWA approved OJT procedures. The Contractor must comply with the recordkeeping and reporting obligations of the Illinois Works Apprenticeship Initiative for the life of the project, including the certification as to whether the trainee/apprentice labor hour goals were met.

Method of Measurement. The unit of measurement is in hours.

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

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION

Effective: August 1, 2012

Revised: February 2, 2017

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

IDOT funds, and various Illinois community colleges operate, pre-apprenticeship training programs throughout the State to provide training and skill-improvement opportunities to promote the increased employment of minority groups, disadvantaged persons and women in all aspects of the highway construction industry. The intent of this IDOT Pre-Apprenticeship Training Program Graduate (TPG) special provision (Special Provision) is to place these certified program graduates on the project site for this Contract in order to provide the graduates with meaningful on-the-job training. Pursuant to this Special Provision, the Contractor must make every reasonable effort to recruit and employ certified TPG trainees to the extent such individuals are available within a practicable distance of the project site.

Specifically, participation of the Contractor or its subcontractor in the Program entitles the participant to reimbursement for graduates' hourly wages at \$15.00 per hour per utilized TPG trainee, subject to the terms of this Special Provision. Reimbursement payment will be made even though the Contractor or subcontractor may also receive additional training program funds from other non-IDOT sources for other non-TPG trainees on the Contract, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving reimbursement from another entity through another program, such as IDOT through the TPG program. With regard to any IDOT funded construction training program other than TPG, however, additional reimbursement for other IDOT programs will not be made beyond the TPG Program described in this Special Provision when the TPG Program is utilized.

No payment will be made to the Contractor if the Contractor or subcontractor fails to provide the required on-site training to TPG trainees, as solely determined by IDOT. A TPG trainee must begin training on the project as soon as the start of work that utilizes the relevant trade skill and the TPG trainee must remain on the project site through completion of the Contract, so long as training opportunities continue to exist in the relevant work classification. Should a TPG trainee's employment end in advance of the completion of the Contract, the Contractor must promptly notify the IDOT District EEO Officer for the Contract that the TPG's involvement in the Contract has ended. The Contractor must supply a written report for the reason the TPG trainee involvement terminated, the hours completed by the TPG trainee on the Contract, and the number of hours for which the incentive payment provided under this Special Provision will be, or has been claimed for the separated TPG trainee.

Finally, the Contractor must maintain all records it creates as a result of participation in the Program on the Contract, and furnish periodic written reports to the IDOT District EEO Officer that document its contractual performance under and compliance with this Special Provision. Finally, through participation in the Program and reimbursement of wages, the Contractor is not relieved

of, and IDOT has not waived, the requirements of any federal or state labor or employment law applicable to TPG workers, including compliance with the Illinois Prevailing Wage Act.

Method of Measurement: The unit of measurement is in hours.

Basis of Payment: This work will be paid for at the contract unit price of \$15.00 per hour for each utilized certified TPG Program trainee (TRAINEES TRAINING PROGRAM GRADUATE). The estimated total number of hours, unit price, and total price must be included in the schedule of prices for the Contract submitted by Contractor prior to beginning work. The initial number of TPG trainees for which the incentive is available for this contract is **4**.

The Department has contracted with several educational institutions to provide screening, tutoring and pre-training to individuals interested in working as a TPG trainee in various areas of common construction trade work. Only individuals who have successfully completed a Pre-Apprenticeship Training Program at these IDOT approved institutions are eligible to be TPG trainees. To obtain a list of institutions that can connect the Contractor with eligible TPG trainees, the Contractor may contact: HCCTP TPG Program Coordinator, Office of Business and Workforce Diversity (IDOT OBWD), Room 319, Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois 62764. Prior to commencing construction with the utilization of a TPG trainee, the Contractor must submit documentation to the IDOT District EEO Officer for the Contract that provides the names and contact information of the TPG trainee(s) to be trained in each selected work classification, proof that that the TPG trainee(s) has successfully completed a Pre-Apprenticeship Training Program, proof that the TPG is in an Apprenticeship Training Program approved by the U.S. Department of Labor Bureau of Apprenticeship Training, and the start date for training in each of the applicable work classifications.

To receive payment, the Contractor must provide training opportunities aimed at developing a full journeyworker in the type of trade or job classification involved. During the course of performance of the Contract, the Contractor may seek approval from the IDOT District EEO Officer to employ additional eligible TPG trainees. In the event the Contractor subcontracts a portion of the contracted work, it must determine how many, if any, of the TPGs will be trained by the subcontractor. Though a subcontractor may conduct training, the Contractor retains the responsibility for meeting all requirements imposed by this Special Provision. The Contractor must also include this Special Provision in any subcontract where payment for contracted work performed by a TPG trainee will be passed on to a subcontractor.

Training through the Program is intended to move TPGs toward journeyman status, which is the primary objective of this Special Provision. Accordingly, the Contractor must make every effort to enroll TPG trainees by recruitment through the Program participant educational institutions to the extent eligible TPGs are available within a reasonable geographic area of the project. The Contractor is responsible for demonstrating, through documentation, the recruitment efforts it has undertaken prior to the determination by IDOT whether the Contractor is in compliance with this Special Provision, and therefore, entitled to the Training Program Graduate reimbursement of \$15.00 per hour.

Notwithstanding the on-the-job training requirement of this TPG Special Provision, some minimal off-site training is permissible as long as the offsite training is an integral part of the work of the contract, and does not compromise or conflict with the required on-site training that is central to the purpose of the Program. No individual may be employed as a TPG trainee in any work classification in which he/she has previously successfully completed a training program leading to journeyman status in any trade, or in which he/she has worked at a journeyman level or higher.

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 Supports1106.02”

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 **150** working days.

PROJECT LABOR AGREEMENT

Effective: May 18, 2007

Revised: August 1, 2019

Description. The Illinois Project Labor Agreements Act, 30 ILCS 571, states that the State of Illinois has a compelling interest in awarding public works contracts so as to ensure the highest standards of quality and efficiency at the lowest responsible cost. A project labor agreement (PLA) is a form of pre-hire collective bargaining agreement covering all terms and conditions of employment on a specific project that is intended to support this compelling interest. It has been determined by the Department that a PLA is appropriate for the project that is the subject of this contract. The PLA document, provided below, only applies to the construction site for this contract. It is the policy of the Department on this contract, and all construction projects, to allow all contractors and subcontractors to compete for contracts and subcontracts without regard to whether they are otherwise parties to collective bargaining agreements.

Execution of Letter of Assent. A copy of the PLA applicable to this project is included as part of this special provision. As a condition of the award of the contract, the successful bidder and each of its subcontractors shall execute a "Contractor Letter of Assent", in the form attached to the PLA as Exhibit A. The successful bidder shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the subcontractor's performance of work on the project. Upon request, copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization at the pre-job conference.

Quarterly Reporting. Section 37 of the Illinois Project Labor Agreements Act requires the Department to submit quarterly reports regarding the number of minorities and females employed under PLAs. To assist in this reporting effort, the Contractor shall provide a quarterly workforce participation report for all minority and female employees working under the PLA of this contract. The data shall be reported on Construction Form BC 820, Project Labor Agreement (PLA) Workforce Participation Quarterly Reporting Form available on the Department's website <http://www.idot.illinois.gov/Assets/uploads/files/IDOT-Forms/BC/BC%20820.docx>.

The report shall be submitted no later than the 15th of the month following the end of each quarter (i.e., April 15 for the January – March reporting period). The form shall be emailed to DOT.PLA.Reporting@illinois.gov or faxed to (217) 524-4922.

Any costs associated with complying with this provision shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

Illinois Department of Transportation
PROJECT LABOR AGREEMENT

This Project Labor Agreement (“PLA” or “Agreement”) is entered into this _____ day of

_____, 2022, by and between the Illinois Department of Transportation (“IDOT” or “Department”) in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades signatory hereto as determined by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of each of its affiliated members (individually and collectively, the “Unions”). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT’s Prime Contractor and each of its subcontractors of whatever tier (“Subcontractor” or “Subcontractors”) on Contract No. (hereinafter, the “Project”).

ARTICLE I - INTENT AND PURPOSES

- 1.1 This PLA is entered into in accordance with the Project Labor Agreement Act (“Act”, 30 ILCS 571). It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays, or other disruptions to the prosecution of the work. The parties acknowledge the obligations of the Contractors and Subcontractors to comply with the provisions of the Act. The parties will work with the Contractors and Subcontractors within the parameters of other statutory and regulatory requirements to implement the Act’s goals and objectives.
- 1.2 As a condition of the award of the contract for performance of work on the Project, IDOT’s Prime Contractor and each of its Subcontractors shall execute a “Contractor Letter of Assent”, in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. The Contractor shall submit a Subcontractor’s Contractor Letter of Assent to the Department prior to the Subcontractor’s performance of Construction Work on the Project. Upon request copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization consistent with this Agreement and at the pre-job conference referenced in Article III, Section 3.1.

- 1.3 Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Contractor Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company, or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company, or entity that does not agree in writing to become bound for the term of this Project by the terms of this PLA prior to commencing such work and to the applicable area-wide collective bargaining agreement(s) with the Union(s) signatory hereto.
- 1.4 It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The parties hereto also agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.
- 1.5 In the event of a variance or conflict, whether explicit or implicit, between the terms and conditions of this PLA and the provisions of any other applicable national, area, or local collective bargaining agreement, the terms and conditions of this PLA shall supersede and control. For any work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors, and for any instrument calibration work and loop checking performed under the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, the preceding sentence shall apply only with respect to Articles I, II, V, VI, and VII.

- 1.6 Subject to the provisions of paragraph 1.5 of this Article, it is the parties' intent to respect the provisions of any other collective bargaining agreements that may now or hereafter pertain, whether between the Prime Contractor and one or more of the Unions or between a Subcontractor and one or more of the Unions. Accordingly, except and to the extent of any contrary provision set forth in this PLA, the Prime Contractor and each of its Subcontractors agrees to be bound and abide by the terms of the following in order of precedence: (a) the applicable collective bargaining agreement between the Prime Contractor and one or more of the Unions made signatory hereto; (b) the applicable collective bargaining agreement between a Subcontractor and one or more of the Unions made signatory hereto; or (c) the current applicable area collective bargaining agreement for the relevant Union that is the agreement certified by the Illinois Department of Labor for purposes of establishing the Prevailing Wage applicable to the Project. The Union will provide copies of the applicable collective bargaining agreements pursuant to part (c) of the preceding sentence to the Prime Contractor. Assignments by the Contractors or Subcontractors amongst the trades shall be consistent with area practices; in the event of unresolved disagreements as to the propriety of such assignments, the provisions of Article VI shall apply.
- 1.7 Subject to the limitations of paragraphs 1.4 to 1.6 of this Article, the terms of each applicable collective bargaining agreement as determined in accordance with paragraph 1.6 are incorporated herein by reference, and the terms of this PLA shall be deemed incorporated into such other applicable collective bargaining agreements only for purposes of their application to the Project.
- 1.8 To the extent necessary to comply with the requirements of any fringe benefit fund to which the Prime Contractor or Subcontractor is required to contribute under the terms of an applicable collective bargaining agreement pursuant to the preceding paragraph, the Prime Contractor or Subcontractor shall execute all "Participation Agreements" as may be reasonably required by the Union to accomplish such purpose; provided, however, that such Participation Agreements shall, when applicable to the Prime Contractor or Subcontractor solely as a result of this PLA, be amended as reasonably necessary to reflect such fact. Upon written notice in the form of a lien of a Contractor's or Subcontractor's delinquency from any applicable fringe benefit fund, IDOT will withhold from the Contractor's periodic pay request an amount sufficient to extinguish any delinquency obligation of the Contractor or Subcontractor arising out of the Project.
- 1.9 In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS

- 2.1 The term Construction Work as used herein shall include all “construction, demolition, rehabilitation, renovation, or repair” work performed by a “laborer or mechanic” at the “site of the work” for the purpose of “building” the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5 and Illinois labor laws.
- 2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.
- 2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.
- 2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre-fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.
- 2.5 The parties are mutually committed to promoting a safe working environment for all personnel at the job-site. It shall be the responsibility of each employer to which this PLA applies to provide and maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.
- 2.6 The use or furnishing of alcohol or drugs and the conduct of any other illegal activity at the job-site is strictly prohibited. The parties shall take every practical measure consistent with the terms of applicable collective bargaining agreements to ensure that the job-site is free of alcohol and drugs.
- 2.7 All parties to this PLA agree that they will not discriminate against any employee based on race, creed, religion, color, national origin, union activity, age, gender or sexual orientation and shall comply with all applicable federal, state, and local laws.

- 2.8 In accordance with the Act and to promote diversity in employment, IDOT will establish, in cooperation with the other parties, the apprenticeship hours which are to be performed by minorities and females on the Project. IDOT shall consider the total hours to be performed by these underrepresented groups, as a percentage of the workforce, and create aspirational goals for each Project, based on the level of underutilization for the service area of the Project (together "Project Employment Objectives"). IDOT shall provide a quarterly report regarding the racial and gender composition of the workforce on the Project.

Persons currently lacking qualifications to enter apprenticeship programs will have the opportunity to obtain skills through basic training programs as have been established by the Department. The parties will endeavor to support such training programs to allow participants to obtain the requisite qualifications for the Project Employment Objectives.

The parties agree that all Contractors and Subcontractors working on the Project shall be encouraged to utilize the maximum number of apprentices as permitted under the terms of the applicable collective bargaining agreements to realize the Project Employment Objectives.

The Unions shall assist the Contractor and each Subcontractor in efforts to satisfy Project Employment Objectives. A Contractor or Subcontractor may request from a Union specific categories of workers necessary to satisfy Project Employment Objectives. The application of this section shall be consistent with all local Union collective bargaining agreements, and the hiring hall rules and regulations established for the hiring of personnel, as well as the apprenticeship standards set forth by each individual Union.

- 2.9 The parties hereto agree that engineering consultants and materials testing employees, to the extent subject to the terms of this PLA, shall be fully expected to objectively and responsibly perform their duties and obligations owed to the Department without regard to the potential union affiliation of such employees or of other employees on the Project.
- 2.10 This Agreement shall not apply to IDOT employees or employees of any other governmental entity.

ARTICLE III - ADMINISTRATION OF AGREEMENT

- 3.1 In order to assure that all parties have a clear understanding of the PLA, and to promote harmony, at the request of the Unions a post-award pre-job conference will be held among the Prime Contractor, all Subcontractors and Union representatives prior to the start of any Construction Work on the Project. No later than the conclusion of such pre-job conference, the parties shall, among other matters, provide to one another contact information for their respective representatives (including name, address, phone number, facsimile number, e-mail). Nothing herein shall be construed to limit the right of the Department to discuss or explain the purpose and intent of this PLA with prospective bidders or other interested parties prior to or following its award of the job.
- 3.2 Representatives of the Prime Contractor and the Unions shall meet as often as reasonably necessary following award until completion of the Project to assure the effective implementation of this PLA.
- 3.3 Any notice contemplated under Article VI and VII of this Agreement to a signatory labor organization shall be made in writing to the Local Union with copies to the local union's International Representative.

ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS

- 4.1 The standard work day and work week for Construction Work on the Project shall be consistent with the respective collective bargaining agreements. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate. If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.
- 4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.
- 4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.

- 4.4 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, employment begins and ends at the Project site; employees shall be at their place of work at the starting time; and employees shall remain at their place of work until quitting time.
- 4.5 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, there shall be no limit on production by workmen, no restrictions on the full use of tools or equipment, and no restrictions on efficient use of manpower or techniques of construction other than as may be required by safety regulations.
- 4.6 The parties recognize that specialized or unusual equipment may be installed on the Project. In such cases, the Union recognizes the right of the Prime Contractor or Subcontractor to involve the equipment supplier or vendor's personnel in supervising the setting up of the equipment, making modifications and final alignment, and performing similar activities that may be reasonably necessary prior to and during the start-up procedure in order to protect factory warranties. The Prime Contractor or Subcontractor shall notify the Union representatives in advance of any work at the job-site by such vendor personnel in order to promote a harmonious relationship between the equipment vendor's personnel and other Project employees.
- 4.7 For the purpose of promoting full and effective implementation of this PLA, authorized Union representatives shall have access to the Project job-site during scheduled work hours. Such access shall be conditioned upon adherence to all reasonable visitor and security rules of general applicability that may be established for the Project site at the pre-job conference or from time to time thereafter.

ARTICLE V – GRIEVANCE PROCEDURES FOR DISPUTES ARISING UNDER A PARTICULAR COLLECTIVE BARGAINING AGREEMENT

- 5.1 In the event a dispute arises under a particular collective bargaining agreement specifically not including jurisdictional disputes referenced in Article VI below, said dispute shall be resolved by the Grievance/Arbitration procedure of the applicable collective bargaining agreement. The resulting determination from this process shall be final and binding on all parties bound to its process.
- 5.2 Employers covered under this Agreement shall have the right to discharge or discipline any employee who violates the provisions of this Agreement. Such discharge or discipline by a contractor or subcontractor shall be subject to Grievance/Arbitration procedure of the applicable collective bargaining agreement only as to the fact of such violation of this agreement. If such fact is established, the penalty imposed shall not be disturbed. Work at the Project site shall continue without disruption or hindrance of any kind as a result of a Grievance/Arbitration procedure under this Article.

- 5.3 In the event there is a deadlock in the foregoing procedure, the parties agree that the matter shall be submitted to arbitration for the selection and decision of an Arbitrator governed under paragraph 6.8.

ARTICLE VI –DISPUTES: GENERAL PRINCIPLES

- 6.1 This Agreement is entered into to prevent strikes, lost time, lockouts and to facilitate the peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers.
- 6.2 A panel of Permanent Arbitrators are attached as addendum (A) to this agreement. By mutual agreement between IDOT and the Unions, the parties can open this section of the agreement as needed to make changes to the list of permanent arbitrators.

The arbitrator is not authorized to award back pay or any other damages for a miss assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

- 6.3 The PLA Jurisdictional Dispute Resolution Process (“Process”) sets forth the procedures below to resolve jurisdictional disputes between and among Contractors, Subcontractors, and Unions engaged in the building and construction industry. Further, the Process will be followed for any grievance or dispute arising out of the interpretation or application of this PLA by the parties except for the prohibition on attorneys contained in 6.11. All decisions made through the Process are final and binding upon all parties.

DISPUTE PROCESS

- 6.4 Administrative functions under the Process shall be performed through the offices of the President and/or Secretary-Treasurer of the Illinois State Federation of Labor, or their designated representative, called the Administrator. In no event shall any officer, employee, agent, attorney, or other representative of the Illinois Federation of Labor, AFL- CIO be subject to any subpoena to appear or testify at any jurisdictional dispute hearing.
- 6.5 There shall be no abandonment of work during any case participating in this Process or in violation of the arbitration decision. All parties to this Process release the Illinois State Federation of Labor (“Federation”) from any liability arising from its action or inaction and covenant not to sue the Federation, nor its officers, employees, agents or attorneys.

- 6.6 In the event of a dispute relating to trade or work jurisdiction, all parties, including the employers, Contractors or Subcontractors, agree that a final and binding resolution of the dispute shall be resolved as follows:
- (a) Representatives of the affected trades and the Contractor or Subcontractor shall meet on the job site within two (2) business days after receiving written notice in an effort to resolve the dispute. (In the event there is a dispute between local unions affiliated with the same International Union, the decision of the General President, or his/her designee, as the internal jurisdictional authority of that International Union, shall constitute a final and binding decision and determination as to the jurisdiction of work.)
 - (b) If no settlement is achieved subsequent to the preceding Paragraph, the matter shall be referred to the local area Building & Construction Trades Council, which shall meet with the affected trades within two (2) business days subsequent to receiving written notice. In the event the parties do not wish to avail themselves of the local Building & Construction Trades Council, the parties may elect to invoke the services of their respective International Representatives with no extension of the time limitations. An agreement reached at this Step shall be final and binding upon all parties.
 - (c) If no settlement agreement is reached during the proceedings contemplated by Paragraphs "a" or "b" above, the matter shall be immediately referred to the Illinois Jurisdictional Dispute Process for final and binding resolution of said dispute. Said referral submission shall be in writing and served upon the Illinois State Federation of Labor, or the Administrator, pursuant to paragraph 6.4 of this agreement. The Administrator shall, within three (3) days, provide for the selection of an available Arbitrator to hear said dispute within this time period. Upon good cause shown and determined by the Administrator, an additional three (3) day extension for said hearing shall be granted at the sole discretion of the Administrator. Only upon mutual agreement of all parties may the Administrator extend the hearing for a period in excess of the time frames contemplated under this Paragraph. Business days are defined as Monday through Friday, excluding contract holidays.
- 6.7 The primary concern of the Process shall be the adjustment of jurisdictional disputes arising out of the Project. A sufficient number of Arbitrators shall be selected from list of approved Arbitrators as referenced Sec. 6.2 and shall be assigned per Sec. 6.8. Decisions shall be only for the Project and shall become effective immediately upon issuance and complied with by all parties. The authority of the Arbitrator shall be restricted and limited specifically to the terms and provisions of Article VI and generally to this Agreement as a whole.

- 6.8 Arbitrator chosen shall be randomly selected based on the list of Arbitrators in Sec. 6.2 and geographical location of the jurisdictional dispute and upon his/her availability, and ability to conduct a Hearing within two (2) business days of said notice. The Arbitrator may issue a “bench” decision immediately following the Hearing or he/she may elect to only issue a written decision, said decision must be issued within two (2) business days subsequent to the completion of the Hearing. Copies of all notices, pleadings, supporting memoranda, decisions, etc. shall be provided to all disputing parties and the Illinois State Federation of Labor.

Any written decision shall be in accordance with this Process and shall be final and binding upon all parties to the dispute and may be a “short form” decision. Fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion. The decision of the Arbitrator shall be final and binding upon the parties hereto, their members, and affiliates.

In cases of jurisdictional disputes or other disputes between a signatory labor organization and another labor organization, both of which is an affiliate or member of the same International Union, the matter or dispute shall be settled in the manner set forth by their International Constitution and/or as determined by the International Union’s General President whose decision shall be final and binding upon all parties. In no event shall there be an abandonment of work.

- 6.9 In rendering a decision, the Arbitrator shall determine:
- (a) First, whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between National or International Unions to the dispute or agreements between local unions involved in the dispute, governs;
 - (b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a previous decision of record governing the case, the Arbitrator shall give equal weight to such decision of record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record and established trade practice in the industry rather than the prevailing practice in the locality; and,

- (c) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.
 - (d) The arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.
- 6.10 The Arbitrator shall set forth the basis for his/her decision and shall explain his/her findings regarding the applicability of the above criteria. If lower ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the Project. Agreements of Record, for other PLA projects, are applicable only to those parties signatory to such agreements. Decisions of Record are those that were either attested to by the former Impartial Jurisdictional Disputes Board or adopted by the National Arbitration Panel.
- 6.11 All interested parties, as determined by the Arbitrator, shall be entitled to make presentations to the Arbitrator. Any interested labor organization affiliated to the PLA Committee and party present at the Hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the Arbitrator and to agree to be bound by its decision. In addition to the representative of the local labor organization, a representative of the labor organization's International Union may appear on behalf of the parties. Each party is responsible for arranging for its witnesses. In the event an Arbitrator's subpoena is required, the party requiring said subpoena shall prepare the subpoena for the Arbitrator to execute. Service of the subpoena upon any witness shall be the responsibility of the issuing party.

Attorneys shall not be permitted to attend or participate in any portion of a Hearing.

The parties are encouraged to determine, prior to Hearing, documentary evidence which may be presented to the Arbitrator on a joint basis.

- 6.12 The Order of Presentation in all Hearings before an Arbitrator shall be
- I. Identification and Stipulation of the Parties
 - II. Unions(s) claiming the disputed work presents its case
 - III. Union(s) assigned the disputed work presents its case
 - IV. Employer assigning the disputed work presents its case
 - V. Evidence from other interested parties (i.e., general contractor, project manager, owner)
 - VI. Rebuttal by union(s) claiming the disputed work
 - VII. Additional submissions permitted and requested by Arbitrator
 - VIII. Closing arguments by the parties

- 6.13 All parties bound to the provisions of this Process hereby release the Illinois State Federation of Labor and IDOT, their respective officers, agents, employees or designated representatives, specifically including any Arbitrator participating in said Process, from any and all liability or claim, of whatsoever nature, and specifically incorporating the protections provided in the Illinois Arbitration Act, as amended from time to time.
- 6.14 The Process, as an arbitration panel, nor its Administrator, shall have any authority to undertake any action to enforce its decision(s). Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Arbitrator or Administrator determining non-compliance with a prior award or decision.
- 6.15 If at any time there is a question as to the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process, the primary responsibility for any determination of the arbitrability of a dispute and the jurisdiction of the Arbitrator shall be borne by the party requesting the Arbitrator to hear the underlying jurisdictional dispute. The affected party or parties may proceed before the Arbitrator even in the absence or one or more stipulated parties with the issue of jurisdiction as an additional item to be decided by the Arbitrator. The Administrator may participate in proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Illinois Jurisdictional Dispute Resolution Process. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process shall bear all the costs, expenses and attorneys' fees incurred by the Illinois Jurisdictional Dispute Resolution Process and/or its Administrator in establishing its jurisdiction.

ARTICLE VII - WORK STOPPAGES AND LOCKOUTS

- 7.1 During the term of this PLA, no Union or any of its members, officers, stewards, employees, agents or representatives shall instigate, support, sanction, maintain, or participate in any strike, picketing, walkout, work stoppage, slow down or other activity that interferes with the routine and timely prosecution of work at the Project site or at any other contractor's or supplier's facility that is necessary to performance of work at the Project site. Hand billing at the Project site during the designated lunch period and before commencement or following conclusion of the established standard workday shall not, in itself, be deemed an activity that interferes with the routine and timely prosecution of work on the Project.

- 7.2 Should any activity prohibited by paragraph 7.1 of this Article occur, the Union shall undertake all steps reasonably necessary to promptly end such prohibited activities.
- 7.2.A No Union complying with its obligations under this Article shall be liable for acts of employees for which it has no responsibility or for the unauthorized acts of employees it represents. Any employee who participates or encourages any activity prohibited by paragraph 7.1 shall be immediately suspended from all work on the Project for a period equal to the greater of (a) 60 days; or (b) the maximum disciplinary period allowed under the applicable collective bargaining agreement for engaging in comparable unauthorized or prohibited activity.
- 7.2.B Neither the PLA Committee nor its affiliates shall be liable for acts of employees for which it has no responsibility. The principal officer or officers of the PLA Committee will immediately instruct, order and use the best efforts of his office to cause the affiliated union or unions to cease any violations of this Article. The PLA Committee in its compliance with this obligation shall not be liable for acts of its affiliates. The principal officer or officers of any involved affiliate will immediately instruct, order or use the best effort of his office to cause the employees the union represents to cease any violations of this Article. A union complying with this obligation shall not be liable for unauthorized acts of employees it represents. The failure of the Contractor to exercise its rights in any instance shall not be deemed a waiver of its rights in any other instance.

During the term of this PLA, the Prime Contractor and its Subcontractors shall not engage in any lockout at the Project site of employees covered by this Agreement.

- 7.3 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.
- 7.4 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.5 of this Article.

- 7.5 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:
- 7.5.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to paragraph 6.8 of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.
 - 7.5.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not before twenty-four (24) hours after the written notice to all parties involved as required above.
 - 7.5.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.
 - 7.5.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.
 - 7.5.E Such Award may be enforced by any court of competent jurisdiction upon the filing of the Award and such other relevant documents as may be required. Facsimile or other hardcopy written notice of the filing of such enforcement proceedings shall be given to the other relevant parties. In a proceeding to obtain a temporary order enforcing the Permanent Arbitrator's Award as issued under this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Permanent Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

- 7.6 Individuals found to have violated the provisions of this Article are subject to immediate termination. In addition, IDOT reserves the right to terminate this PLA as to any party found to have violated the provisions of this Article.
- 7.7 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.
- 7.8 The fees and expenses of the Permanent Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

ARTICLE VIII – TERMS OF AGREEMENT

- 8.1 If any Article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.
- 8.2 This Agreement shall be in full force as of and from the date of the Notice of Award until the Project contract is closed.
- 8.3 This PLA may not be changed or modified except by the subsequent written agreement of the parties. All parties represent that they have the full legal authority to enter into this PLA. This PLA may be executed by the parties in one or more counterparts.
- 8.4 Any liability arising out of this PLA shall be several and not joint. IDOT shall not be liable to any person or other party for any violation of this PLA by any other party, and no Contractor or Union shall be liable for any violation of this PLA by any other Contractor or Union.
- 8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

[The Balance of This Page Intentionally Left Blank]

Addendum A

IDOT Slate of Permanent Arbitrators

1. Bruce Feldacker
2. Thomas F. Gibbons
3. Edward J. Harrick
4. Brent L. Motchan
5. Robert Perkovich
6. Byron Yaffee
7. Glenn A. Zipp

Execution Page

Illinois Department of Transportation

Director of Highways Project Implementation

Director of Finance & Administration

Yangu Kim, Chief Counsel

Omer Osman, Secretary

(Date)

Illinois AFL-CIO Statewide Project Labor Agreement Committee, representing the Unions listed below:

(Date)

List Unions:

Exhibit A - Contractor Letter of Assent

(Date)

To All Parties:

In accordance with the terms and conditions of the contract for Construction Work on [Contract No.], this Letter of Assent hereby confirms that the undersigned Prime Contractor or Subcontractor agrees to be bound by the terms and conditions of the Project Labor Agreement established and entered into by the Illinois Department of Transportation in connection with said Project.

It is the understanding and intent of the undersigned party that this Project Labor Agreement shall pertain only to the identified Project. In the event it is necessary for the undersigned party to become signatory to a collective bargaining agreement to which it is not otherwise a party in order that it may lawfully make certain required contributions to applicable fringe benefit funds, the undersigned party hereby expressly conditions its acceptance of and limits its participation in such collective bargaining agreement to its work on the Project.

(Authorized Company Officer)

(Company)

SWPPP



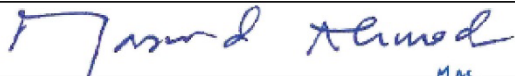
Storm Water Pollution Prevention Plan



Route	Marked Route	Section Number
FAP 840	IL 50	140N
Project Number	County	Contract Number
C-93-051-20	KANKAKEE	66957

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

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

Signature	Date
	04-06-2022

Print Name	Title	Agency
Masood Ahmad	Regional Engineer / Region 2	Illinois Department of Transportation

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

I. Site Description:

A. Provide a description of the project location; include latitude and longitude, section, town, and range:

The project is located in Kankakee County, the Village of Bradley, on IL 50 from 600' south of Armour Road northerly for 1,365 feet, and on Armour Road from 1,188 feet west of IL 50 easterly for 2,270 feet. SW 1/4 of Section 16 and the NE 1/4 of Section 21, T.13N. R.12E., 3rd PM; Latitude 41degrees, 09', 45.90"; Longitude 87 degrees, 51', 3.02".

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

Widening of the existing pavement, construction of new curb and gutters, HMA resurfacing of the widened pavement, installation of pipe culverts, storm sewers and underground detention facilities consisting of storm sewers and precast box culverts. Storm runoff will be detained above ground in the ditch along IL 50 south of Armour Road. Paved ditch will be constructed in east ditch of the detention area. The work will be performed in seven construction stages. When excavation is being performed, temporary seeding will be placed to establish vegetation prior to placement of final seeding and sodding. Inlet protection will be installed at storm sewer drainage structures and pipe culverts to prevent silt from entering the structure. Temporary ditch checks and perimeter erosion barrier will be installed at locations where protection is needed. All temporary erosion control features will be installed in accordance with Standard 280001 and the Erosion Control Plan included in the plans.

C. Provide the estimated duration of this project:

Approximately 24 months.

D. The total area of the construction site is estimated to be 15.50 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 7.14 acres.

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

Pre-Construction Weighted Runoff Coefficient 0.47; Post-Construction Weighted Runoff Coefficient 0.62

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

USDA, NRCS Custom Soil Resource Report for Kankakee County
69A-Milford silty clay loam, 0 to 2 percent slopes
189A- Martinton silt loam, 0 to 2 percent slopes
298A- Beecher silt loam, 0 to 2 percent slopes
805B- Orthents, clayey, undulating

G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site; see Phase I report:

The biological resources review during Phase I determined the project did not require a wetland survey and no wetlands would be either impacted or disturbed.

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

The earth excavation for ditch construction from approximate Rt. Sta. 1278+00 to Rt. Sta. 1288+00 has the most potential for erosion during construction.

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

The excavation and storm sewer construction shall be performed as detailed on the Drainage Plan and the cross sections. The Maintenance of Traffic plan details the stages of construction.

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

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

State of Illinois Department of Transportation storm sewer system.

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

Village of Bradley MS4, Village of Bourbonnais MS4 & Bourbonnais Township MS4.

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

The storm water outlets into an existing storm sewer system. There is no active drainage district.

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

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

No areas within the project limits are deemed protected or to remain undisturbed.

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

N.A.

303(d) Listed receiving waters for suspended solids, turbidity, or siltation.
The name(s) of the listed water body, and identification of all pollutants causing impairment:

None

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

At various times during the excavation phase, Temporary Erosion Control Seeding and Temporary Ditch Checks will be installed. Perimeter Erosion Control Barrier will be installed as needed to prevent silt from exiting the construction site. Inlet and Pipe protection will be installed on the upstream end of all pipe culverts and storm sewer drainage structures to protect these structures from silt entering the structure. This work will be done in accordance with Standard 280001 and the Erosion Control Plan included in the plans.

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

N.A.

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

N.A.

Applicable Federal, Tribal, State, or Local Programs

None

Floodplain

Not within a FEMA delineated floodplain.

Historic Preservation

None

Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation
TMDL (fill out this section if checked above)

The name(s) of the listed water body:

None

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

N.A.

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

N.A.

Threatened and Endangered Species/Illinois Natural Areas (INA)/Nature Preserves

None

Other

Wetland

None

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

Antifreeze / Coolants

Solid Waste Debris

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

II. Controls:

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

A. Erosion and Sediment Controls: At a minimum, controls must be coordinated, installed and maintained to:

1. Minimize the amount of soil exposed during construction activity;
2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. Stabilization Practices: Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II.B.1 and II.B.2, stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

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

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

Temporary Erosion Control Seeding will be used to establish ground cover during construction.

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

As soon as possible after final grading operations are complete, either Permanent Seeding with Erosion Control Blanket or Sodding shall be installed to establish vegetation.

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

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

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

Permanent check dams will be installed in the IL 50 ditches south of Armour Road to control the release rate of the storm water runoff. Paved ditch and sloped wall will be installed in the east IL 50 ditch, south of Armour Road, to prevent scour in the detention ditch. Riprap will be used at the permanent check dams to prevent scour of the ditch checks. Perimeter erosion barrier will be used where there is no ditch to contain the storm water runoff. Temporary ditch checks will be used in ditches as needed to control silt runoff in the ditches. Storm drain inlet protection will be used at the upstream end of all drainage structures, inlets and open lid manholes to prevent silt from entering the structure.

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

Permanent check dams and riprap will remain in place as detailed on the Drainage Plan sheets. The paved ditch and sloped walls will also remain in place as detailed.

D. Treatment Chemicals

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

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

E. Permanent (i.e., Post-Construction) Storm Water Management Controls: Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined based on the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT BDE Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

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

Description of permanent storm water management controls:

This project includes storm sewers and precast box culverts to detain and release the storm water runoff. The IL 50 ditch south of Armour Road will be utilized as an above ground detention system. Permanent ditch checks with riprap slopes and paved ditch will be used in the above ground detention system to control the release rate of the storm water runoff and control erosion. The final graded earth slopes will receive either permanent seeding with excelsior blanket or sodding.

- F. Approved State or Local Laws:** The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the IEPA's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

All management practices, controls and other provisions provided in the plans are in accordance with the IDOT Standard Specifications.

- G. Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342A.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
- Approximate duration of the project, including each stage of the project
 - Rainy season, dry season, and winter shutdown dates
 - Temporary stabilization measures to be employed by contract phases
 - Mobilization time-frame
 - Mass clearing and grubbing/roadside clearing dates
 - Deployment of Erosion Control Practices
 - Deployment of Sediment Control Practices (including stabilized cons
-
- Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
 - Paving, saw-cutting, and any other pavement related operations
 - Major planned stockpiling operation
 - Time frame for other significant long-term operations or activities that may plan non-storm water discharges as dewatering, grinding, etc
 - Permanent stabilization activities for each area of the project
2. During the pre-construction meeting, the Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
- Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
 - Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
 - Material Delivery, Storage and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
 - Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
 - Waste Disposal - Discuss methods of waste disposal that will be used for this project.
 - Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
 - Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on

- this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Fueling - Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
- Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
- Additional measures indicated in the plan.

III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Describe how all items will be checked for structural integrity, sediment accumulation and functionality. Any damage or undermining shall be repaired immediately. Provide specifics on how repairs will be made. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacturer's specifications.

The general maintenance shall be performed in accordance with the IDOT Erosion and Sediment Control Field Guide and according to Section 280 of the Standard Specifications.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site including Borrow, Waste, and Use Areas, which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report, BC 2259. Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa_swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor

performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection

for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

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

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

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

The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each

classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a

separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice

performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one

and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of

Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.