

113

Letting March 5, 2021

Notice to Bidders, Specifications and Proposal



**Contract No. 85697
ROCK ISLAND County
Section 15-00017-00-SW (Port Byron)
Route FAP 308 (II 84)
Project JSEA-108 ()
District 2 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. March 5, 2021 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. 85697
ROCK ISLAND County
Section 15-00017-00-SW (Port Byron)
Project JSEA-108 ()
Route FAP 308 (IL 84)
District 2 Construction Funds**

Sidewalk construction, curb & gutter, storm swer, water main, segmental block retaining wall, intersection resurfacing and pavement markings on IL 84/High Street, from 11th street to south of Linn Street in Port Byron.

- 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,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2021

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 4-1-16) (Revised 1-1-21)

SUPPLEMENTAL SPECIFICATIONS

<u>Std. Spec. Sec.</u>	<u>Page No.</u>
106 Control of Materials	1
107 Legal Regulations and Responsibility to Public	2
109 Measurement and Payment	3
205 Embankment	4
403 Bituminous Surface Treatment (Class A-1, A-2, A-3)	5
404 Micro-Surfacing and Slurry Sealing	6
405 Cape Seal	17
406 Hot-Mix Asphalt Binder and Surface Course	27
420 Portland Cement Concrete Pavement	28
424 Portland Cement Concrete Sidewalk	30
442 Pavement Patching	31
502 Excavation for Structures	32
503 Concrete Structures	35
504 Precast Concrete Structures	38
505 Steel Structures	40
506 Cleaning and Painting New Steel Structures	41
511 Slope Wall	42
522 Retaining Walls	44
542 Pipe Culverts	45
586 Sand Backfill for Vaulted Abutments	46
602 Catch Basin, Manhole, Inlet, Drainage Structure, and Valve Vault Construction, Adjustment, and Reconstruction	48
603 Adjusting Frames and Grates of Drainage and Utility Structures	49
630 Steel Plate Beam Guardrail	50
631 Traffic Barrier Terminals	53
670 Engineer's Field Office and Laboratory	54
701 Work Zone Traffic Control and Protection	55
704 Temporary Concrete Barrier	58
780 Pavement Striping	60
781 Raised Reflective Pavement Markers	61
783 Pavement Marking and Marker Removal	62
888 Pedestrian Push-Button.....	64
1001 Cement	65
1003 Fine Aggregates	66
1004 Coarse Aggregates	67
1006 Metals	70
1008 Structural Steel Coatings	73
1020 Portland Cement Concrete	77
1043 Adjusting Rings	79
1050 Poured Joint Sealers	81
1069 Pole and Tower	83
1077 Post and Foundation	84
1083 Elastomeric Bearings	85
1095 Pavement Markings	86
1096 Pavement Markers	87
1101 General Equipment	88
1102 Hot-Mix Asphalt Equipment	89
1103 Portland Cement Concrete Equipment	91
1105 Pavement Marking Equipment	93
1106 Work Zone Traffic Control Devices	95

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	97
2	X	Subletting of Contracts (Federal-Aid Contracts)	100
3	X	EEO	101
4		Specific EEO Responsibilities Non Federal-Aid Contracts	111
5		Required Provisions - State Contracts	116
6		Asbestos Bearing Pad Removal	122
7		Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal	123
8		Temporary Stream Crossings and In-Stream Work Pads	124
9		Construction Layout Stakes Except for Bridges	125
10		Construction Layout Stakes	128
11		Use of Geotextile Fabric for Railroad Crossing	131
12		Subsealing of Concrete Pavements	133
13		Hot-Mix Asphalt Surface Correction	137
14		Pavement and Shoulder Resurfacing	139
15		Patching with Hot-Mix Asphalt Overlay Removal	140
16		Polymer Concrete	142
17		PVC Pipeliner	144
18		Bicycle Racks	145
19		Temporary Portable Bridge Traffic Signals	147
20		Reserved	149
21		Nighttime Inspection of Roadway Lighting	150
22		English Substitution of Metric Bolts	151
23		Calcium Chloride Accelerator for Portland Cement Concrete	152
24		Quality Control of Concrete Mixtures at the Plant	153
25	X	Quality Control/Quality Assurance of Concrete Mixtures	161
26		Digital Terrain Modeling for Earthwork Calculations	177
27		Reserved	179
28		Preventive Maintenance – Bituminous Surface Treatment (A-1)	180
29		Reserved	186
30		Reserved	187
31		Reserved	188
32		Temporary Raised Pavement Markers	189
33		Restoring Bridge Approach Pavements Using High-Density Foam	190
34		Portland Cement Concrete Inlay or Overlay	193
35		Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	197
36		Longitudinal Joint and Crack Patching	200
37		Concrete Mix Design – Department Provided	202

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

The following LOCAL ROADS AND STREETS 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>
LRS1	Reserved	204
LRS2	Furnished Excavation	205
LRS3	X Work Zone Traffic Control Surveillance	206
LRS4	X Flaggers in Work Zones	207
LRS5	Contract Claims	208
LRS6	Bidding Requirements and Conditions for Contract Proposals	209
LRS7	Bidding Requirements and Conditions for Material Proposals	215
LRS8	Reserved	221
LRS9	Bituminous Surface Treatments	222
LRS10	Reserved	223
LRS11	Employment Practices	224
LRS12	Wages of Employees on Public Works	226
LRS13	Selection of Labor	228
LRS14	Paving Brick and Concrete Paver Pavements and Sidewalks	229
LRS15	Partial Payments	232
LRS16	Protests on Local Lettings	233
LRS17	Substance Abuse Prevention Program	234
LRS18	Multigrade Cold Mix Asphalt	235

SPECIAL PROVISIONS INDEX

TABLE OF CONTENTS

Page

DIVISION 100 – GENERAL REQUIREMENTS AND COVENANTS	1-7
DIVISION 200 – EARTHWORK, LANDSCAPING AND EROSION CONTROL.....	8-10
EARTH EXCAVATION	8
CLEARING & GRUBBING	8
TREE REMOVAL	9
TOP SOIL, FURNISH AND PLACE, 4”	9
SEEDING, CLASS 1, SPECIAL.....	9
MULCTH, METHOD 3	10
STONE RIPRAP, ALL CLASSES	10
 DIVISION 400 - SURFACE COURSES, PAVEMENTS, REHABILITATION AND SHOULDERS	 11-13
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	11
HOT-MIX ASPHALT SURFACE COURSE, “MIX D”, N50	11
HOT-MIX ASPHALT DRIVEWAY PAVEMENT, ALL THICKNESSES	11
PORTLAND CEMENT CONCRETE DRIVEWAYS.....	11
PORTLAND CEMENT CONCRETE SIDEWALK	11
DETECTABLE WARNINGS	12
SIDEWALK REMOVAL.....	12
CONCRETE STEPS, ALL TYPES	13
 DIVISION 500 – STRUCTURES	 14-34
PEDESTRIAN RAILINGS	14
PIPE HANDRAIL.....	14
SEGMENTAL CONCRETE BLOCK WALL	15
STORM SEWERS, ALL CLASSES, ALL TYPES, ALL SIZES	17
STORM SEWER REMOVAL	17
STORM SEWER (WATER MAIN REQUIREMENTS)	17
WATER MAIN (All Sizes).....	19
DUCTILE IRON FITTINGS (Tees, Bends, Caps, Plugs & Reducers)	19
CONNECT TO EXISTING WATER MAIN.....	19
WATER MAIN CASING PIPE	19
WATER MAIN, BORED AND JACKED (ALL SIZES)	27
SANITARY SEWER, BORED AND JACKED (ALL SIZES)	27
WATER VALVES (ALL SIZES)	30
WATER SERVICE LINES, (ALL SIZES)	31
WATER SERVICE CONNECTION (ALL SIZES)	31
CORPORATION STOPS (ALL SIZES)	31
CURB STOP & BOX (ALL SIZES).....	31
FIRE HYDRANTS	33
PLUG WATER MAIN, ALL SIZES	34

DIVISION 600 – INCIDENTAL CONSTRUCTION		35-37
MANHOLES, ALL TYPES, ALL DIAMETERS		35
DOUBLE INLET, SPECIAL		35
INLET, SPECIAL		35
DRAINAGE STRUCTURE SPECIAL		35
INLET SPECIAL, NO. 3, 5, AND 6		35
INLETS, TYPE B, WITH SPECIAL FRAME AND GRATE		35
MANHOLES TO BE ADJUSTED		35
COMBINATION CONCRETE CURB AND GUTTER, ALL TYPES		36
CONCRETE GUTTER, TYPE A (SPECIAL)		36
DIVISION 700 – TRAFFIC CONTROL PLAN		38-41
MISCELLANEOUS SPECIAL PROVISIONS		42-74
CIPP SEWER LINING, 8"		42
SANITARY SEWER, ALL SIZES		48
SANITARY SEWER CONNECTION		48
SANITARY SERVICE CLEANOUT		48
ADJUST SANITARY SEWER CLEANOUT		48
MANHOLES, SANITARY 4-DIAMETER, TYPE 1 FRAME, CLOSED LID		54
DROP SANITARY MANHOLE, WITH TYPE 1 FRAME, CLOSED LID		54
SANITARY MANHOLES TO BE ADJUSTED		54
RETAINING WALL REMOVAL		58
REMOVE AND REPLACE EXISTING BLOCK WALL		58
BRICK PAVER REMOVAL AND REPLACEMENT		58
FENCE REMOVAL AND REINSTALLATION		59
STEEL RAILING REMOVAL		59
PERIMETER EROSION BARRIER, ROLLED EXCELSIOR		59
RELOCATE EXISTING LIGHT POLE		60
CONCRETE WINGWALL REMOVAL		61
CONCRETE HEADWALL REMOVAL		61
SPECIAL STRUCTURE		61
DRAINAGE STRUCTURE REPAIR		61
INLET BOX, SPECIAL		61
CONNECT TO BOX CULVERT		61
BOX CULVERT REMOVAL		61
DRAINAGE STRUCTURE RECONSTRUCTION		61
TRENCH DRAIN		61
PERMITS		
ILLINOIS EPA WATER SUPPLY CONSTRUCTION PERMIT		63-65
ILLINOIS EPA WATER POLLUTION CONTROL PERMIT		66
STORMWATER POLLUTION PREVENTION PLAN		67-74
ILLINOIS EPA GENERAL NPDES PERMIT		75
LR 107-4	INSURANCE	76
LR 702	CONSTRUCTION AND MAINTENANCE SIGNS	77
LR 1030	GROWTH CURVE	78
	IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING	80-81

BDE SPECIAL PROVISIONS

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

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	April 1, 2020
80274	82	X	Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80246			Bituminous Surface Treatment with Fog Seal	Jan. 1, 2020	
80241			Bridge Demolition Debris	July 1, 2009	
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
* 80425			Cape Seal	Jan. 1, 2020	Jan. 1, 2021
80384	85	X	Compensable Delay Costs	June 2, 2017	April 1, 2019
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293			Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387			Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
* 80434			Corrugated Plastic Pipe (Culvert and Storm Sewer)	Jan. 1, 2021	
80029	89	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Mar. 2, 2019
80402	99	X	Disposal Fees	Nov. 1, 2018	
80378			Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
80421			Electric Service Installation	Jan. 1, 2020	
80415	101	X	Emulsified Asphalts	Aug. 1, 2019	
80423			Engineer's Field Office Laboratory	Jan. 1, 2020	
80229			Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80417	104	X	Geotechnical Fabric for Pipe Underdrains and French Drains	Nov. 1, 2019	
80420			Geotextile Retaining Walls	Nov. 1, 2019	
* 80433			Green Preformed Thermoplastic Pavement Markings	Jan. 1, 2021	
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2020
80422			High Tension Cable Median Barrier	Jan. 1, 2020	Nov. 1, 2020
80416	106	X	Hot-Mix Asphalt – Binder and Surface Course	July 2, 2019	Nov. 1, 2019
80398			Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	Nov. 1, 2019
* 80406			Hot-Mix Asphalt – Mixture Design Verification and Production (Modified for I-FIT Data Collection)	Jan. 1, 2019	Jan. 2, 2021
80347			Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling	Nov. 1, 2014	July 2, 2019
80383			Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	July 2, 2019
80411			Luminaires, LED	April 1, 2019	
80393	113	X	Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	Mar. 1, 2019
80045			Material Transfer Device	June 15, 1999	Aug. 1, 2014
80418			Mechanically Stabilized Earth Retaining Walls	Nov. 1, 2019	Nov. 1, 2020
* 80424			Micro-Surfacing and Slurry Sealing	Jan. 1, 2020	Jan. 1, 2021
80428	115	X	Mobilization	April 1, 2020	
80412			Obstruction Warning Luminaires, LED	Aug. 1, 2019	
80430	116	X	Portland Cement Concrete – Haul Time	July 1, 2020	
80359			Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2019
80431			Portland Cement Concrete Pavement Patching	July 1, 2020	
80432			Portland Cement Concrete Pavement Placement	July 1, 2020	
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306	117	X	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 2, 2021
80407	127	X	Removal and Disposal of Regulated Substances	Jan. 1, 2019	Jan. 1, 2020
80419	138	X	Silt Fence, Inlet Filters, Ground Stabilization and Riprap Filter Fabric	Nov. 1, 2019	April 1, 2020
80395			Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
80340			Speed Display Trailer	April 2, 2014	Jan. 1, 2017
80127			Steel Cost Adjustment	April 2, 2014	Aug. 1, 2017
80408			Steel Plate Beam Guardrail Manufacturing	Jan. 1, 2019	
80413			Structural Timber	Aug. 1, 2019	
80397	144	X	Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	145	X	Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
* 80435			Surface Testing of Pavements – IRI	Jan. 1, 2021	
80298			Temporary Pavement Marking	April 1, 2012	April 1, 2017
80409	146	X	Traffic Control Devices – Cones	Jan. 1, 2019	
80410			Traffic Spotters	Jan. 1, 2019	
20338	147	X	Training Special Provisions	Oct. 15, 1975	
80318			Traversable Pipe Grate for Concrete End Sections	Jan. 1, 2013	Jan. 1, 2018
80429			Ultra-Thin Bonded Wearing Course	April 1, 2020	
80288	150	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	152	X	Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
80414			Wood Fence Sight Screen	Aug. 1, 2019	April 1, 2020
80427	153	X	Work Zone Traffic Control Devices	Mar. 2, 2020	
80071			Working Days	Jan. 1, 2002	

The following special provisions are in the 2021 Supplemental Specifications and Recurring Special Provisions.

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location(s)</u>	<u>Effective</u>	<u>Revised</u>
80277	Concrete Mix Design – Department Provided	Check Sheet #37	Jan. 1, 2012	April 1, 2016
80405	Elastomeric Bearings	Article 1083.01	Jan. 1, 2019	
80388	Equipment Parking and Storage	Article 701.11	Nov. 1, 2017	
80165	Moisture Cured Urethane Paint System	Article 1008.06	Nov. 1, 2006	Jan. 1, 2010
80349	Pavement Marking Blackout Tape	Articles 701.04, 701.19(f), 701.20(j) and 1095.06	Nov. 1, 2014	April 1, 2016
80371	Pavement Marking Removal	Articles 783.02-783.04, 783.06 and 1101.13	July 1, 2016	
80389	Portland Cement Concrete	Article 1020.04 Table 1 and Note 4	Nov. 1, 2017	
80403	Traffic Barrier Terminal, Type 1 Special	Articles 631.04 and 631.12	Nov. 1, 2018	

The following special provisions have been deleted from use.

<u>File Name</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80317	Surface Testing of Hot-Mix Asphalt Overlays	Jan 1, 2013	Aug. 1, 2019

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction, Adopted January 1, 2016", the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein, and the **latest edition of the Standard Specifications for Water and Sewer Construction in Illinois**, which apply to and govern Section 15-00017-00-SW in Port Byron, Illinois, and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

This project is located along Illinois State Highway 84 from 475 feet south of Linn Street to 11th Street in the Village of Port Byron, Illinois. The project also extends east/west on several side streets to make the necessary tie-ins.

DESCRIPTION OF PROJECT

The proposed project will include ADA accessible sidewalks, street ramps, and crosswalks along the IL 84 corridor. The work includes reconstruction of approximately 5,800 feet of 5' wide PCC sidewalk and approximately 3,000 feet of water main. Additionally, the project includes removal and replacement of segmental block retaining walls, PCC stairs, storm sewer, storm inlets, sanitary sewer CIPP lining, PCC/HMA driveways, curb and gutter and asphalt roadway at intersecting streets.

COMPLETION DATE PLUS WORKING DAYS

Revise Article 108.05(b) of the Standard Specifications to read:

(b) Completion Date Plus Working Days. The Contractor shall perform their work in such a manner that the PROJECT shall be complete on or prior to **November 12, 2021**. The PROJECT shall have all work complete (including landscaping and restoration), besides punch list items. All milestones below shall also be met.

Milestones.

1. All work between Linn Street and Walnut Street shall be completely restored prior to the Village's Tug Fest scheduled for August 12-15, 2021.
2. All remaining seeding shall take place prior to September 24, 2021. Any required inter-seeding shall take place prior to the seeding date within the standard specifications.

The Contractor will be allowed 15 working days after the completion date to complete punch list items.

DIVISION 100 - GENERAL REQUIREMENTS AND COVENANTS

100.01 RECORD DRAWINGS

1. The Engineer will provide the Contractor with a suitable set of contract drawings on which daily records of changes and deviations from contract shall be recorded. All buried or concealed piping, conduit, or similar items shall be located by dimensions and elevations on the record drawings.
2. The daily record of changes shall be the responsibility of Contractor's field superintendent. No arbitrary mark-ups will be permitted. Record drawings will be reviewed monthly to ensure adequate records are being kept. Failure to provide evidence of up-to-date record drawings will result in denial of payment application.
3. At completion of the project, the Contractor shall submit clean and neat marked-up record drawings to the Engineer for presentation to the Owner. Record drawings shall be submitted prior to, or accompany the Contractor's final payment application. Final payment to the Contractor shall not be made until acceptable record drawings are provided as defined under this contract.

100.02 CONSTRUCTION STAKING

1. Construction staking will be provided by the Village of Port Byron's consulting engineer, MSA Professional Services. Construction staking scheduling and coordination is the responsibility of the Contractor. Contractor shall provide the Engineer 72-hours' notice of required staking. Staking shall be complete one (1) time for the following:
 - a. Control Points & Bench Marks
 - b. Right-of-Way Easements, & Land Section Markers at 250' increments
 - c. Storm Sewer Structures at Center, and 2 offsets, storm sewer at 100' min. increment
 - d. Water Main At Tees, Hydrants, Horizontal Deflections, and Main Line at 100' min. Increments
 - e. Curb and Gutter at 25' increments and at radius points, horizontal PC & PT Points, vertical curves, and critical elevations
 - f. Retaining walls at 25' increments
 - g. Sidewalks at 50' increments and at radius points, horizontal PC & PT Points, and vertical curves
 - h. ADA Ramps (2 Stakes at each ramp for horizontal and vertical control). Note that the curb will also be staked.

Staking requests shall be a minimum of a ½ days' worth of work. 16 trips are included and anticipated. Additional staking or re-staking will be the responsibility of the Contractor. The Contractor shall report any damage to layout stakes or control points to the Engineer immediately upon discovery.

100.03 WORK RESTRICTIONS

1. Working days shall be Monday through Friday 6:30 AM to 6:30 PM. Work shall not be completed on national holidays, weekends, or outside of these working hours unless requested 48-hours in advance and approved by the Engineer, Village, and Department of Transportation. This time restriction shall not apply to sawing contraction joints, as required in Article 420.05, maintenance or operation of safety or traffic control devices, or construction of an emergency nature.
2. Contractor shall coordinate mail delivery with Post Master and property owners. Temporary cluster mail boxes will be required to be set up for each phase of the construction at a location as determined by the Post Master and Contractor and approved by Engineer. This work shall be considered incidental to other work on the project.
3. Contractor shall coordinate refuse (garbage/recycling) service with Republic Disposal and residents that are affected due to construction and road closures. Contractor shall relocate properties garbage/recycling containers if required to relocate pickup locations during construction. This work shall be considered incidental to other work on the project.
4. Contractor shall coordination construction and road closures with emergency services and provide access as required in the event of an emergency to one of the properties in the work area. This work shall be considered incidental to other work on the project.

100.04 COORDINATION WITH OWNER & RESIDENTS

1. Contractor shall provide weekly progress updates and next week's schedule to the Engineer and Owner on a regular basis.
2. Contractor shall coordinate driveway access changes, driveway removals, refuse pickup, mail delivery, and other pertinent information that effects property owners along the project.
3. The Contractor's project manager and site superintendent shall attend monthly progress meetings at Port Byron's Village Hall to discuss progress, progress payments, construction issues, potential change orders, and upcoming schedule.
4. Contractor shall coordinate all water shutoffs and boil orders with Owner. Owner will assist Contractor in determining affected properties that the Contractor will be required to notify of shutoffs and/or boil orders via door hangers.
5. Contractor shall coordinate with School regarding bus routes, pickup/drop off locations, and any road closures that affect bus routes and normal traffic to and from the school.

100.05 COORDINATION & COOPERATION WITH UTILITIES

1. Utility locations shown on the plans were plotted from various information sources including GIS, survey, field observations, and record information furnished by the Utility Companies. The utility locations' accuracy shall be considered approximate. No responsibility is accepted by the Village, Designer, or Engineer for the utility locations as shown on the plans or that all utility facilities are shown on the plans.
2. Utility locations shown in the plans and profiles represent locations prior to utility relocations. The Contractor is advised that some utility companies may have relocated their facilities prior to the start of construction under this contract. Before commencing construction operations, the Contractor shall obtain from the Engineer and the Utility Companies any available information regarding the relocated positions of utilities within the project limits. Whether various utilities have been relocated or remain in their original location, it shall be the responsibility of the Contractor to determine their exact location at the time of construction and to protect them.
3. The Utility Companies may be adjusting or relocating their facilities during construction of the sidewalk improvements. The Contractor shall be responsible for coordinating and cooperating with the Utility Companies while the Utility Companies perform their work in accordance with Article 107.37 of the Standard Specifications. The Utility Companies shall be responsible for excavating, making any necessary adjustments or relocations and backfilling their excavations. The Contractor shall notify the Engineer immediately if the Utility Companies are not responsive to performing their work in a timely manner. Any associated cost for these requirements or for delays in the project will not be considered for payment and no additional compensation will be allowed.
4. The Contractor shall be responsible for avoiding conflicts between overhead utility lines and the equipment used for excavating.
5. The names of representative of known utility companies are listed below:

GAS & ELECTRIC:

MID-AMERICAN ENERGY COMPANY
2811 5th AVE.
ROCK ISLAND, IL 61201
(809) 793-3704
MATT KOVACIC
Mskovacic@midamerican.com
NATE TEAGER
(563) 333-8721
Nathan.teager@midamerican.com

CABLE/INTERNET:

MEDIACOM
4507 49TH AVE
MOLINE, IL 61265
(309)-743-4735

MITCH HANCOCK - CONST. SUPERVISOR
(563)-529-1866
mhancock@mediacomcc.com

TELEPHONE & INTERNET:

FRONTIER COMMUNICATION
KALIN HINSHAW
(815) 895-1515

FIBER:

AUREON
7760 OFFICE PLAZA DRIVE SOUTH
WEST DES MOINES, IA 50266
(515) 830-0455
KELVIN SCHOON
Kelvin.Schoon@aureon.com

FIBER:

STRADA COMMUNICATIONS, LLC
224 13th STREET
RAPIDS CITY, IL 61278
(309)-496-3737
TOM BUSSERT
tom@stradacomm.com

SEWER & WATER:

VILLAGE OF PORT BYRON
300 SOUTH HIGH STREET
PORT BYRON, IL 61275
(309)-314-9114
ERIC SIKKEMA – PUBLIC WORKS
pbpw@mchis.com

100.06 STATUS OF UTILITIES

1. MidAmerican Energy (power) have identified the relocation of several of their utility poles as noted on the plans. Contractor shall begin coordinating the relocation efforts immediately upon receiving the Notice of Award.
2. MidAmerican Energy (gas) has been notified of the project, provided plans, and directed to identify utilities in conflict with the proposed project. MidAmerican has not responded, but are known to have many known conflicts along IL 84. Contractor to coordinate with Mid-American to ensure the gas main is relocated ahead of utility work.
3. Mediacom has been notified of the project, provided plans, and directed to identify utilities in conflict with the proposed project. Mediacom has identified that their existing

cable along the project is mostly aerial, and will need to be coordinated with MidAmerican as they relocate some of the overhead utility poles. They anticipate on completing the work after MidAmerican relocates their utility poles.

4. Frontier has been notified of the project, provided plans, and directed to identify utilities in conflict with the proposed project. Frontier has indicated that their utilities are aerial and will need to be relocated as required.
5. Aureon has been notified of the project, provided plans, and directed to identify utilities in conflict with the proposed project. Aureon has identified that the existing fiber is aerial. Therefore, they will need to relocate their utilities once the overhead lines are relocated.
6. Strada has been notified of the project, provided plans, and directed to identify utilities in conflict with the proposed project. STRADA has identified that the existing fiber along the project from Cherry Street to the south will not be in conflict.
7. The Village of Port Byron has notified all utility company of the project and requested relocations (as required) and said relocations will be coordinated by the Contractor as part of this contract.

100.07 CONSTRUCTION PHASING

The Contractor shall develop a phasing plan to minimize impacts and maintain access to all properties throughout construction. All temporary aggregate surfacing and/or ramps required to maintain access to all properties shall be incidental to construction. The minimum access requirements are noted within this section.

1. **ACCESS TO PROPERTIES**
 1. Contractor shall provide vehicular access to all properties affected by the project.
 2. Contractor shall provide 24-hours' notice to residential property owners and 48-hours' notice to commercial properties prior to removing driveways or limiting access.
 3. Contractor shall phase construction as to limit the amount of time where property owners do not have access to their driveways/frontage to a maximum of 10 days unless property owners allow additional time. Contractor shall coordinate access with each property owner throughout the duration of construction. During utility installation, the Contractor shall use temporary aggregate surfacing to maintain access to driveways.
 4. Contractor shall maintain one (1) entrance to Casey's Gas Station at all times.
 5. Contractor shall maintain half of the entrance to Blackhawk Bank at all times to provide one-way access in-or-out. In addition, a 2nd temporary gravel access shall be provided into the existing parking lot.
2. **PHASING PLAN**

Contractor shall develop and submit proposed phasing plan for approval within 10 days of receipt of executed contract. It shall be responsibility of the Contractor to develop a phasing plan to meet the requirements as outlined throughout the Special Provisions. The following items shall be considered inclusive to the project to accommodate the Contractor's phasing plan:

1. Temporary aggregate for roadway, driveway, and sidewalk transitions or accesses. If transitions are anticipated for a duration greater than 30 days, then the transitions shall be coordinated with the Engineer and constructed of HMA in lieu of aggregate.
2. Temporary connections and disconnections to water and/or sewer to maintain services to all properties.
3. Water/sewer service or temporary water/sewer service shall be maintained during normal business hours for the Casey's, Subway, and the Laundromat.

DIVISION 200 - EARTHWORK, LANDSCAPING, AND EROSION CONTROL

EARTH EXCAVATION

Work shall be in accordance to Section 202 and the following:

Construction Requirements

Contractor shall remove existing roadway, aggregate base, top soil (salvage) and earth excavation to proposed subgrade. Estimated quantity was calculated in AutoCAD Civil 3D from top of existing surface to proposed subgrade (pavement, curb, driveways, and sidewalk was NOT subtracted from this quantity). Contractor shall be responsible for locating and hauling excess excavated materials to an approved fill or dump site.

Upon preparation of the roadway subgrades, a proof roll shall be completed with a loaded tandem truck, in the presence of the Engineer, to determine if any unsuitable subgrade material needs to be removed and replaced with aggregate subgrade improvement. .

Contractor shall re-grade the swale north of Casey's property line to the contours indicated on the plans.

Method of Measurement and Payment

Payment will be made per CUBIC YARD at contract quantities for EARTH EXCAVATION. Payment includes pavement removals. Milling of asphalt surface will be paid separately.

CLEARING AND GRUBBING

Description

Work shall be in accordance to Section 201 and the following:

Construction Requirements

Contractor shall remove small trees (not specifically called out for removal), stumps less than 6-inches, branches, shrubs, and bushes required to install the utilities, sidewalk, and retaining walls as indicated on the plans. Bushes, plantings, and other miscellaneous landscaping that is noted on the plans to be salvaged to the property owner shall be coordinated with owner, removed with care, and provided to the property owner.

The Contractor shall also coordinate with Engineer and property owner any tree or shrub branches that need to be trimmed/pruned, as required to install the utilities. Trees that are required to be trimmed along the project shall be done with a saw and shall be at the tree trunk. Any pruning required to facilitate construction shall also be considered inclusive.

Method of Measurement and Basis of Payment

This work will be paid at the contract unit price LUMP SUM for CLEARING AND GRUBBING.

TREE REMOVAL

Work shall be in accordance to Section 201 and the following:

Construction Requirements

Contractor shall schedule the removal of trees immediately upon notification of award of contract.

Stumps shall be removed or ground to a minimum of 12" below finished grade.

Method of Measurement and Payment

Tree removals shall be measured for payment at the contract unit price per UNIT (circumference in inches) for TREE REMOVAL, of the various diameters. Removals shall include all stump removals. Approximate trunk sizes are indicated in the plans.

Trees/Stumps less than 6-inch in diameter or not identified for removal on the plans shall be inclusive to Clearing and Grubbing.

TOPSOIL, FURNISH AND PLACE, 4"

Work shall be in accordance to Section 211 and the following:

Construction Requirements

Contractor may salvage and re-use top soil from within the project limits, if approved by Engineer. Contractor shall be responsible for screening the topsoil to remove all rocks, sticks, and breaking up clods prior to placement. The topsoil shall also be top dressed with imported, screened, black topsoil free from debris, sticks, rocks, and immediately prior to seeding. Top dressing shall be a minimum of 1"-2" in thickness. A Harley rake (or similar equipment) shall be used to blend turf areas into existing grade and if required to loosen topsoil prior to seeding.

Method of Measurement and Basis of Payment

Topsoil will be paid per contract quantities per SQUARE YARD for TOPSOIL, FURNISH AND PLACE, 4". No additional payment will be made for re-grading and preparing areas outside of grading limits. No additional payment will be made for furnishing, spreading, and re-grading areas that washed out due to erosion.

SEEDING, CLASS 1, SPECIAL

Work shall be in accordance to Section 250 and the following:

Construction Requirements

Contractor shall be responsible for seeding at a time when the weather is favorable for seeding. Contractor shall be required to water the grass as required in order to provide 3-inches of grass with 90% coverage free of weeds. The Village will supply the water to the Contractor at no charge, however, the Contractor shall install backflow preventers and meters and document the amount of water used. Any re-seeding, inter-seeding, and/or weed control due to lack of adequate growth, rain washouts, or weed growth shall be completed as required to establish the turf areas to the

satisfaction of the engineer. Restoration shall occur upon completion of each phase, and multiple grading and seeding mobilizations shall be required for temporary and/or final seeding. Contractor shall not be allowed to wait to restore the entire site until the project is complete.

Method of Measurement and Basis of Payment

Seeding will be paid per contract quantities per ACRE for SEEDING, CLASS 1. No additional payment will be made for inter-seeding, re-seeding, or seeding of areas outside of grading limits. Watering and weed control will not be measured and shall be inclusive. All seeding used for restoration associated with Contractor staging areas or temporary accesses shall be considered inclusive. Any temporary seeding required shall be considered inclusive and will not be paid for separately.

MULCH, METHOD 3

Work shall be in accordance to Section 251 except for Method of Measurement and Basis of Payment.

Method of Measurement and Basis of Payment

Mulching will be paid per ACRE for MULCH, METHOD 3. No additional payment will be made for additional mulch (if required) for inter-seeding, re-seeding, or seeding of areas outside of grading limits. All mulch used for restoration associated with Contractor staging areas or temporary accesses shall be considered inclusive. Any temporary mulching required shall be considered inclusive and will not be paid for separately.

STONE RIPRAP, ALL CLASSES

Work shall be in accordance to Section 281 and the following:

Description

Riprap shall be installed at the bottom of a drainage swale north of the property line at Casey's.

Construction Requirements

Contractor shall install filter fabric and rip rap immediately following the re-grading of the swale.

Method of Measurement and Basis of Payment

Stone riprap will be measured and paid at the contract unit price per SY of STONE RIPRAP, of the class specified. Filter fabric shall be considered incidental to riprap. No additional payment will be made for temporary erosion control measures if rip rap is not immediately placed after excavation and grading of the swale is complete.

DIVISION 400 - SURFACE COURSES, PAVEMENTS, REHABILITATION AND SHOULDERS

HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

Work shall be in accordance to Section 406 and the following:

Construction Requirements

All hot mix asphalt binder and surface course quality control shall be performed by the contractor. Contractor shall follow Local Roads Special Provision LR 1030, Special Provision for Growth Curve.

Method of Measurement and Basis of Payment

Hot-Mix Asphalt Binder Course will be measured and paid per the contract unit price per TON for HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50. Prime coat will not be measured or paid for separately, and considered inclusive. All costs associated with quality control of binder and surface course shall be considered inclusive to respective pay item.

HOT-MIX ASPHALT SURFACE COURSE, "MIX D", N50

Work shall be in accordance to Section 406 and the following:

Construction Requirements

All hot mix asphalt binder and surface course quality control shall be performed by the contractor. Contractor shall follow Local Roads Special Provision LR 1030, Special Provision for Growth Curve.

Contractor shall adjust all manholes and valve boxes to final proposed grade prior to the surface course being installed.

Method of Measurement and Basis of Payment

Hot-Mix Asphalt Surface Course will be measured and paid per the contract unit price per TON for HOT-MIX ASPHALT SURFACE COURSE, "MIX D", N50. Tack coat will not be measured or paid for separately, and considered inclusive. All costs associated with quality control of binder and surface course shall be considered inclusive to respective pay item.

HOT-MIX ASPHALT DRIVEWAY PAVEMENT, ALL THICKNESSES

Description

Work shall be in accordance to Section 406 and the following:

Method of Measurement and Basis of Payment

Hot-Mix Asphalt Driveway Pavement will be measured and paid per the contract unit price per SQUARE YARD for HOT-MIX ASPHALT DRIVEWAY PAVEMENT (per Thickness specified). Tack coat will not be measured or paid for separately, and considered inclusive.

PORTLAND CEMENT CONCRETE DRIVEWAYS

PORTLAND CEMENT CONCRETE SIDEWALK

Work entails constructing driveway, mail box turnouts, and sidewalk per the details.

Work shall be in accordance to Section 420, Section 424, and the following:

Construction Requirements

A Type B finish consisting of a broom finish will be required.

Proposed concrete driveways will be tied to existing concrete driveways with #4 deformed, epoxy coated tie-bars at 24" OC. ½" preformed expansion material shall be utilized in concrete driveways at the back of curb, back of sidewalk, and on the side of the concrete driveway where the sidewalk abuts a concrete driveway. The joints shall be filled with a gray, self-leveling sealant.

Cold Weather Protection: When the official National Weather Service forecast for the construction area predicts a low below 35-degrees F, or if the actual temperature drops below 35-degrees F, concrete less than 72-hours shall be provided protection.

Temperature Control for Placement: Concrete can be placed when the air temperature is above 40-degrees F and rising, and concrete placement shall stop when the falling temperature reaches 40-degrees F or below, unless otherwise approved by engineer. No concrete shall be placed if the official National Weather Service forecast in the next 24 hours predicts a low of 25-degrees F, or lower.

Fixtures in concrete shall be adjusted to conform to the finished surface pavement and will not be paid for separately. Adjustment of structures including, but not limited to, water and gas valves are anticipated to be adjusted. Abandoned water valves stem boxes shall be removed to 2.5 feet below subgrade and filled with fine grained granular material, and this is considered incidental to work.

Method of Measurement and Payment

Concrete pavement will be measured and paid at the contract unit price per SQUARE YARD for PORTLAND CEMENT CONCRETE DRIVEWAY, 7" or per SQUARE FOOT for PORTLAND CEMENT CONCRETE SIDEWALK, 5". Additional payment tie bars and utility adjustments will NOT be made.

DETECTABLE WARNINGS

Work shall be in accordance to Section 424 and the following:

Materials

Detectable warning pavers shall be cast iron and be available in different sized lengths. Detectable warnings at depressed corners or ramps along the radius shall be factory manufactured to fit the proposed curb radius.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per SQUARE FOOT for DETECTABLE WARNINGS.

SIDEWALK REMOVAL

Work shall be in accordance to Section 440 and the following:

Description

The Contractor shall remove existing sidewalk and stairs as indicated on the plans.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per SQUARE FOOT for SIDEWALK REMOVAL. Removal of stairs will be considered "sidewalk removal" and be measured and paid as SIDEWALK REMOVAL.

CONCRETE STEPS, ALL TYPES

Work shall be in accordance with Section 424 and the following:

Description

The work includes constructing reinforced concrete stairs per the detail drawings. Type A Steps match the adjacent turf grades where Type B Steps require a cast-in-place concrete wall along the outer limits of the stairs to match with the top of stairs and top of segmental block retaining wall, per the details.

Work shall be in accordance to Section 424 and the following:

Construction Requirements

The Contractor shall use chairs, tie rebar, and have all rebar inspected by the Engineer prior to placement of concrete.

Stairs shall be constructed on a 6" minimum compacted aggregate base.

A Type B finish consisting of a rough broom finish will be required.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per SQUARE FOOT for CONCRETE STEPS, of the type specified. SQUARE FOOT shall be measured as the horizontal face of each step; the vertical face of steps will not be measured. Payment shall include all materials, labor, and equipment for, excavation, subgrade preparation, aggregate base, rebar, and concrete. Concrete side walls are considered inclusive to Type B stairs and are not included in the square foot area of the step quantity. Payment for the railing will be paid separate under the respective pay item(s).

DIVISION 500 - STRUCTURES

PEDESTRIAN RAILINGS

PIPE HANDRAIL

Work shall be in accordance to Section 509 and the following:

Description

The work shall consist of furnishing and installing metal railings per the detail drawings and shall include a complete ADA compliant handrail on either side of the concrete steps and as shown on the construction drawings. Railing shall be required where concrete steps configuration include 2 or more risers.

Materials

i. Pedestrian Railings

Railing/fence shall be 2" min. diameter posts and shall be aluminum per Section 1006.30 and similar to photo below. Railing/fence shall be 42" in height. Railing shall be powder coated per manufacturer's specifications and shall be black in color.



ii. Pipe Handrail

Railing shall be double 1-1/4" to 2" diameter rails (per detail) and shall be aluminum per Section 1006.30. Railing shall be manufactured with pipe bends and connections for handrail. Field bending shall not be allowed. Railing shall be powder coated per manufacturer's specifications and shall be black powder coated.

Construction

Install the railing continuously with no gaps or breaks along the length specified in the contract documents. Use welded connections between components. Grind connection to remove sharp or abrasive edges and to remove other irregularities.

Method of Measurement and Payment

Railings will be measured for payment at the contract unit price per FOOT for PEDESTRIAN RAILINGS AND PIPE HANDRAIL as measured along the top of the handrail from end of railing to end of railing. Payment shall include all materials, labor, and equipment for complete installation of railing.

SEGMENTAL CONCRETE BLOCK WALL

The work shall be in accordance to Section 522 and the following:

Description

The work entails preparing stamped structural engineering drawings and constructing a segmental block retaining wall within the right-of-way. The wall is required to fit within the 2' allowable right-of-way behind the proposed sidewalk.

Submittals & Certification

The Contractor shall submit a block face/color options and Manufacturer's certification, prior to start of work, that the retaining wall system components meet the requirements of this specification and the structure design. The Village shall approve the block unit and color. The Contractor shall submit construction drawings and design calculations for the retaining wall system prepared and stamped by a Professional Engineer registered in the State of Illinois.

Segmental Concrete Block Wall Units

Concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.

Concrete units shall conform to the following structural and geometric requirements measured in accordance with ASTM C140 Sampling and Testing Concrete Masonry Units:

1. Compressive strength: ≥ 3000 psi (21 MPa);
2. Absorption: $\leq 8\%$ for standard weight aggregates;
3. Dimensional tolerances: $\pm 1/8$ " (3 mm) from nominal unit dimensions not including rough split face;
4. Unit size: 8" (203 mm) (H) x 18" (457 mm)(W) x 12" (304 mm)(D) minimum;
5. Unit weight: 67 -lbs/unit (30 kg/unit) minimum for standard weight aggregates.

Concrete units shall conform to the following performance testing:

1. Inter unit shear strength in accordance with ASTM D6916 (NCMA SRWU-2): 600-plf (8 kN/m) minimum at 2-psi (13 kPa) normal pressure;

Keystone concrete units shall conform to the following constructability requirements:

1. Vertical setback: 1/8" (3 mm) ± per course (near vertical) or 1" (25 mm) + per course per the design;
2. Alignment and grid positioning mechanism fiberglass pins, two per unit;
3. Maximum horizontal gap between erected units shall be ≤ 1/2 inch (13 mm).

Materials

Segmental retaining wall blocks shall be pre-approved by the Engineer/Village. The minimum size of the blocks shall be 18" wide by 12" deep and 8" in height, not weighing less than 60 pounds and consist of a pinned wall system. Cap units shall be required on all walls.

Segmental blocks shall resemble natural limestone appearance and options shall be presented to the Village for final selection.

Delivery, Storage & Handling

Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification have been received.

Contractor shall protect all materials from damage due to jobsite conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

Construction Requirements

The proposed wall structure shall be contained within the allowable 2 feet within the right-of-way. Geo-grid behind the wall will not be allowed and the wall structure shall satisfy internal and external stability aspects including sliding, overturning, bearing pressure, and settling.

Retaining wall shall be constructed in accordance with the manufacturer's specifications. The top cap blocks shall be secured with the use of construction glue as recommended by the manufacturer.

Method of Measurement and Basis of Payment

Retaining wall shall be measured and paid at the contract unit price per SQUARE FOOT for SEGMENTAL CONCRETE BLOCK WALL of exposed block and top cap. Blocks which are required to be installed below grade (per detail), will not be measured and are considered inclusive. The unit price of block wall shall include all labor, equipment, and materials required for the excavation, subgrade preparation, aggregate/PCC base preparation, sub-drain installation, drain outlets, and engineered backfill.

STORM SEWERS, ALL CLASSES, ALL TYPES, ALL SIZES

Work shall be in accordance to Section 550 and the following:

Materials

All storm sewer shall be reinforced concrete pipe (RCP), except where specified to be water main quality pipe over water main crossings, or small diameter ductile iron as noted in the plans. All joints in concrete storm sewer pipe shall be rubber gaskets. No lift holes in the RCP storm sewer will be allowed.

Construction Requirements

Extreme caution shall be used in the excavation and installation of storm sewer adjacent to existing utilities and highway. Contractor shall coordinate utility pole holds as required to facilitate the work.

Connections to existing storm sewer shall be completed with concrete collars or use of a rubber, water-tight- coupling with shear rings. Connection to existing storm sewer/inlets shall be inclusive to storm sewer installation.

Trench embedment for storm sewer shall be Class "B" with bedding consisting of imported granular material (< 1/2" chips). Backfill shall consist of imported granular material under roadway and native soils within turf areas. Proper haunching technique and compaction shall be required.

Method of Measurement and Payment

Storm sewer will be measured for payment at the contract unit price per FOOT for STORM SEWER, of the specified material and diameter. This work shall include all labor, equipment, and materials involved in the excavation, dewatering, bedding, embedment and backfill (imported granular material and native soils) of the pipe.

No additional payment will be made for overhead utility holds, overhead power relocation, or slowed production due to existing utilities.

STORM SEWER REMOVAL

Description

Work shall be in accordance to Section 551 and the following:

Construction Requirements

The Contractor shall remove all existing storm sewer and storm structures shown on the plans. Storm sewer to be abandoned in place and not required for removal shall be plugged with concrete.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per FOOT for STORM SEWER REMOVAL.

STORM SEWER (WATER MAIN REQUIREMENTS)

Description

This work shall consist of furnishing and installing water main quality pipe at the locations shown on the plans.

Materials

a) Ductile iron water main Class 52

Joints for Ductile Iron pipe shall be:

1. Mechanical Joints - AWWA C111 and C600

2. Push-On-Joints - AWWA C111 and C600

b) Polyvinyl Chloride (PVC) C900 DR 18 (Green or White)

1. All water main quality storm sewer shall be Polyvinyl Chloride Pipe (PVC) and shall meet the requirements of ANSI/AWWA C900, Pressure Class (PC) 235, minimum; or ASTM D2241, Pressure Rating (PR) 250, minimum; and a DR 18 or less.

i. Joints

Joints shall be push-on type employing elastomeric seals (rubber gaskets) and conform to ASTM D3139. The seal shall meet the requirements of ASTM F477. Pipe compound shall meet cell class 12454 per ASTM D1784.

Construction Requirements

The storm sewer water main shall be installed according to the applicable portions of Section 550 and 561 of the Standard Specifications and the Standard Specifications for Water and Sewer Main Construction. In case of conflict between the Standard Specifications, the Standard Specifications for Water and Sewer Main Construction in Illinois shall take precedence and shall govern.

No testing or disinfections of the newly laid storm sewer water main will be required. A water-tight connection is required between the storm sewer water main and the storm sewer.

Method of Measurement

Storm sewer water main of the various diameters will be measured for payment in feet, measured in place.

Basis of Payment

This work will be paid for at the contract unit price per FOOT for STORM SEWER, TYPE 1, WATER MAIN QUALITY PIPE, of the diameter specified.

**WATER MAIN (All Sizes)
DUCTILE IRON FITTINGS (Tees, Bends, Caps, Plugs & Reducers)
CONNECT TO EXISTING WATER MAIN
WATER MAIN CASING PIPE**

Description

This work shall consist of the installation of new water main or adjusting of the elevation of existing water mains in accordance with the plans and details or as directed by the ENGINEER. All work shall conform to the Standard Specifications for Water and Sewer Construction in Illinois (latest edition) except as modified herein. Installation of water main shall include the installation of all required ductile iron pipe fittings such as but not limited to tees, bends, reducers, and crosses. Electrically continuous tracer wire with access points shall be installed during water main construction to be used for locating pipe after installation.

At locations indicated in the plans, proposed water main(s) is to be connected into existing water main(s). These connections shall be made by utilizing appropriately sized water main quality ductile iron pipe reducers, bends, sleeves, and approved wedge action restraint glands. This includes the installation of any blow offs (whips) or connections necessary to fill, test, and/or disinfect the new main prior to making said connections.

Installation Methods

The CONTRACTOR may use open trench or trenchless technologies to complete the water main installation. For trenchless application refer to Utility Horizontal Directional Drilling (HDD) specifications following. **All water main installed under IL 84 shall be installed utilizing jacking and boring, with steel casing pipe.** All labor, equipment, and materials necessary to excavate and install the water main and appurtenances shall be inclusive to the unit price of the water main and no additional compensation shall be considered for selection of differing installation methods.

Horizontal Directional Drilling (HDD) Method

- i. Contractor Workmanship & Qualifications
The Contractor must be able to document the successful installation of five (5) similar HDD installations within the past three (3) years. Similar work is defined as HDD installations having outside diameters, drilled lengths, and subsurface conditions, which are similar to or more challenging than, those of the proposed installation. Documentation should include a contact person, phone number, year constructed, installed length, pull section diameter, and a brief description of the subsurface conditions encountered.
- ii. Submittals
Contractor shall submit such Submittals and details required for the construction and installation of the HDD to the Engineer for review. Submittals and details shall indicate the intended site arrangement, dimensions, major support requirements, entry pit and exit pit areas, detailed construction requirements and a sequence of construction. Engineer's review of the sequences of construction, does not alleviate the Contractor from conflicts with others, or give the Contractor the right to do work in the area.
- iii. Instrumentation
Contractor shall at all times provide and maintain instrumentation which will accurately locate the pilot hole, measure drill string axial and torsional loads, and measure drilling

fluid discharge rate and pressure. The Owner or designated representative will have access to these instruments and their readings at all times. A log of all recorded readings shall be maintained and will become a part of the "Record Drawing" information to be supplied by Contractor.

iv. Water

Contractor may obtain water from the Village. A backflow device and meter shall be used and water usage shall be documented and provided to the Village.

v. Protection of Underground Utilities

1. Contractor shall undertake the following steps prior to commencing drilling operations in a location that might contain underground facilities.
 - i. Contact the utility location/notification service for the construction area.
 - ii. Positively locate and stake all existing lines, cables, or other underground facilities including exposing any facilities that are located within 10 feet of the designed drilled path.
 - iii. Pot hole existing utilities to confirm location and elevation.
 - iv. Modify drilling practices and downhole assemblies to prevent damage to existing facilities.
2. Contractor shall be responsible for locating any and all underground facilities regardless of Owner's previous efforts in this regard. Contractor shall be responsible for all losses and repairs occasioned by damage to underground facilities resulting from drilling operations.
3. The Contractor shall notify the Engineer if a previously unidentified underground facility interferes with the work to such an extent that an alteration of the drilled path design is required.

vi. Pilot Hole Drilling

1. As the pilot hole is advanced its actual location shall be plotted in both plan and profile at intervals not exceeding the approximate length of one (1) joint of drill pipe. The Engineer shall be provided with the position of the pilot hole upon request.
2. The pilot hole shall be drilled along the path shown on the Drawings to the tolerances listed below. However, in all cases, right-of-way or easement restrictions shall take precedence over the listed tolerances. Regardless of the tolerance achieved, no pilot hole will be accepted if any of the final pipeline installation will be in violation of right-of-way or easement restrictions. Additionally, concern for adjacent utilities and/or structures shall take precedence over the listed tolerances. Listing of tolerances does not relieve Contractor from responsibility for safe operations or damage to adjacent utilities and structures.
3. The pilot hole shall be drilled along the path shown on the Contract Drawings to the tolerances listed below.
 - i. Elevation - plus 0.5 feet, minus 1 foot. The pipe shall have no intermediate high points that may trap air.
 - ii. Alignment - plus or minus 2 feet as long as it does not come to within 3 feet of the right-of-way boundary.
 - iii. Entry Point Location - The pilot hole shall initially penetrate the ground surface at the location shown on the Contract Drawings or at a location such that the final pipe location is as shown on the Contract Drawings.

- iv. Exit Point Location - The pilot hole shall finally penetrate the ground surface within the horizontal tolerance specified for alignment.
- v. Curvature of completed pilot hole shall not exceed that which after pipe installation will result in pipe wall stresses greater than 0.50 of yield stress.
- 4. If the pilot hole fails to conform to the tolerance specified above, Contractor shall retract the drill string to a point where the drilled path is within the specified tolerances and redrill until the specified tolerances are achieved.
- 5. Acceptance:
 - i. If pilot hole alignment fails to conform to specified requirements, drill new pilot hole with alignment meeting specified requirements. The Engineer shall make the final determination if a boring must be abandoned.
- 6. Record Drawing Survey:
 - i. Following completion of pilot hole drilling, Contractor shall submit record drawings to the Engineer including a tabulation of coordinates, referenced to the drilled entry point, which accurately describe the horizontal and vertical alignment of the pilot hole at intervals not exceeding one length of drill pipe. All deviations from the proposed line and grade shall be shown on the plot. This tabulation shall be in addition to the log of recorded readings required under "Instrumentation".

vii. Pipe Installation

- 1. Pre-Reaming:
 - i. Contractor shall conduct prereaming operations to insure that a hole sufficient to accommodate the pull section has been produced. At a minimum, the hole shall be pre-reamed to the lesser of 150% of the outside diameter of the pull section, or 12 inches greater than the outside diameter of the pull section.
 - ii. Any damage to the pipe resulting from inadequate pre-reaming shall be the responsibility of Contractor.
- 2. Pulling Loads:
 - i. The maximum allowable tensile load imposed on a steel pull section shall be no greater than 90% of the product of the specified minimum yield strength of the pipe and the area of the pipe section. The maximum allowable tensile load imposed on an HDPE pull section shall be no greater than 36% of the product of the specified tensile yield strength and the area of the pipe section. If more than one value is involved for a given pull section, the lesser shall govern.
- 3. Torsional Stress:
 - i. A swivel shall be used to connect the pull section to the reaming assembly to minimize torsional stress imposed on the section.
- 4. Pull Section Support:
 - i. The pull section shall be supported during pull back so that it moves freely and is otherwise protected to prevent damage.
- 5. External Collapse Pressure:
 - i. The pull section shall be installed in the reamed hole in such a manner that external pressures are minimized and an appropriate counter-balancing internal pressure is maintained.
 - ii. Any damage to the pipe resulting from external pressure during installation shall be the responsibility of Contractor.

6. Buoyancy Modification:
 - i. When installing steel pipe, buoyancy modification shall be used at the discretion of the contractor. When installing HDPE pipe, Contractor shall employ a buoyancy modification procedure during pullback to reduced uplift forces and decrease pulling loads. Any buoyancy modification procedure proposed for use shall be submitted to the Engineer for review.
 - ii. Contractor shall be responsible for any damage to the pull section resulting from buoyancy modification.
7. Inspections:
 - i. If the pull section is corrosion coated, it shall be inspected for holidays with a holiday detector as it enters the hole. Any coating damage found shall be repaired.
 - ii. Inspection and repair of the corrosion coating shall be conducted in accordance with Division 02 requirements for the applicable material.
8. Pipe Relaxation:
 - i. When HDPE pipe is installed, an extra 3% to 5% of the total pipe length shall be pulled through the hole to allow for pipe relaxation. After HDPE pipe has been installed, it shall be allowed to relax for a minimum of 12 hours before connecting to adjacent pipe.
9. Provide joint restraint at connection with adjacent pipe material.

viii. Drilling Fluids

1. Recirculation:
 - i. Contractor shall maximize recirculation of drilling fluid surface returns. Contractor shall provide solids control and fluid cleaning equipment of a configuration and capacity that can process surface returns and produce drilling fluid suitable for reuse.
 - ii. Owner may specify standards for solids control and cleaning equipment performance or for treatment of excess drilling fluid and drilled spoil. Owner specified standards, if any, are listed in the Special Procedures – Division 01.
2. Disposal:
 - i. Disposal of excess drilling fluids is the responsibility of Contractor and shall be conducted in compliance with all environmental regulations, right-of-way and workspace agreements, and permit requirements. Proposed drilling fluid disposal procedures shall be submitted to the Engineer for review.
 - ii. Contractor shall be responsible for locating a disposal site and transporting all excess fluids to the disposal site and paying any disposal costs.
3. Inadvertent Returns:
 - i. Contractor shall employ his best efforts to maintain full annular circulation of drilling fluids. Drilling fluid returns at locations other than the entry and exit points shall be minimized. In the event that annular circulation is lost, Contractor shall take steps to restore circulation. If inadvertent surface returns of drilling fluids occur, they shall be immediately contained with hand placed barriers (i.e., hay bales, sand bags, silt fences, etc.) and

collected using pumps as practical. If the amount of the surface return is not great enough to allow practical collection, the affected area shall be diluted with fresh water and the fluid will be allowed to dry and dissipate naturally. If the amount of the surface return exceeds that which can be contained with hand placed barriers, small collection sumps (less than 5 cubic yards) may be used. If the amount of the surface return exceeds that which can be contained and collected using small sumps, drilling operations shall be suspended until surface return volumes can be brought under control.

- ii. Clean up of inadvertent returns and repair of any damage caused by such returns shall be the responsibility of the Contractor.

ix. Testing

1. Prior to pipe installation, the Contractor must perform a low-pressure air test on section to be pulled to confirm pipe integrity.
2. Post-installation testing of the installed pull section shall be conducted and documented in accordance with the water main construction requirements.

Materials

a. Polyvinyl Chloride Pipe (PVC) Water Main

All water mains shall be Polyvinyl Chloride Pipe (PVC) and shall meet the requirements of ANSI/AWWA C900, Pressure Class (PC) 235, minimum; or ASTM D2241, Pressure Rating (PR) 250, minimum; and a DR 18 or less.

i. Joints (Trenched Method)

Joints shall be push-on type employing elastomeric seals (rubber gaskets) and conform to ASTM D3139. The seal shall meet the requirements of ASTM F477. Pipe compound shall meet cell class 12454 per ASTM D1784.

ii. Joints (HDD Method)

Joints for PVC using HDD techniques shall be either Certa-Lok in accordance with ASTM D3139 or fusible PVC pipe with plain ends for butt fusing.

b. Ductile Iron Water Main

Ductile Iron hydrant leads shall meet the requirements of ANSI/AWWA C151/A21.51, Class 52. Standard cement-mortar lining shall meet the requirements of ANSI/AWWA C104/A21.4. Joints shall be either push-on or mechanical joint conforming to ANSI/AWWA C111/A21.11 unless specified otherwise. All joints, fittings, etc., shall be equipped to provide electric continuity. The continuity must be provided through the use of a trademarked, well-established method acceptable to the Engineer.

c. Ductile Iron Fittings

All necessary full body fittings shall conform to ANSI/AWWA C110/ A21.10 and ANSI/AWWA C111/A21.11 with bituminous coating. Compact fittings shall conform to ANSI/AWWA C153/A21.53 and ANSI/AWWA C111/21.11 with bituminous coating. All fittings shall be provided with cement mortar lining conforming to ANSI/AWWA C104/A21.4.

Only ductile iron fittings manufactured in USA and meeting the AIS requirements shall be allowed. Stainless steel nuts and bolts shall be provided on all mechanical joints.

d. Joint Restraint

1. Mechanical Joints

Mechanical joints shall be installed with wedge action restraining glands. Stainless steel nuts and bolts shall be provided on all mechanical joints.

Restraint devices for nominal pipe sizes 3 inch through 54 inch shall consist of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of ANSI/AWWA C110/A21.10.

The devices shall have a working pressure rating of 350 psi for 3-16 inch, 250 psi for 18-48 inch and 200 psi for the 54 inch size. Ratings are for water pressure and must include a minimum safety factor of 2 to 1 in all sizes.

2. Push-on Joints

Restrained push-on joints for straight pipe shall be as manufactured by the Pipe Manufacturer. Gaskets shall meet the material requirements of ANSI/AWWA C111/A21.11. Restrained joint retainer rings shall be manufactured of ductile iron compatible with pipe. Joint restraint shall be required per the details in the plans.

All restrained joints shall have a pressure rating equal to that of the pipe.

e. PVC Casing Pipe (Sewer Crossings)

All casing pipe shall meet the requirements of PVC water main. Casing spacers shall be manufactured by Cascade Waterworks, or Ford Meter Box Co. Inc. Water tight end seals shall be used as manufactured by Cascade Waterworks Manufacturing Company.

f. Tracer Wire

Tracer wire for direct burial installations, tracer wire shall be No. 12 gauge, ASTM C578, Type IV, solid insulated copper wire rated for wet conditions. Tracer wire shall be installed in conjunction with all water main utilities and installed continuous to the greatest extent possible and in accordance with the contract drawings and the requirements of the Engineer. Tracer wire insulation shall be blue in color to denote potable water and shall be run along and taped down to the pipe every 5 feet. Tracer wire terminal location boxes shall be Brigham & Taylor, with a cast iron lockable top and will be placed at all hydrants. Cast iron tops shall be appropriately labeled, "WATER".

For HDD Methods, Tracer wire shall be 1/8 inch stainless steel braided wire. A minimum of two (2) wires are required. Copper wire shall not be allowed.

Construction Requirements

New water main that is to be installed shall be sequenced in such a way so as to maintain the existing main up until the new main is installed and has passed all required testing. The CONTRACTOR shall develop a water main sequencing plan and submit it to the ENGINEER and OWNER for approval.

The existing water main being replaced may require shutdowns of sections of the water mains prior to switching over to the newly constructed water main. All shut downs are to be coordinated with the OWNER and will require notification via door hangers (by CONTRACTOR) to all residences and businesses affected by any shutdown. Operation of any valves will be by the OWNER. All shutdowns are to take place during normal working hours Monday-Friday (excluding holidays) and shall not be performed between 4PM to 8AM unless an emergency shutdown is necessary or as directed by the OWNER. No shutdown shall be greater than five (5) hours in duration and there shall not be more than two (2) shutdowns for any section of water main, unless approved by the Engineer and Village. The CONTRACTOR is to notify the ENGINEER and OWNER no less than 48 hours prior to shutdown to allow time for planning and notifications.

During laying operations, no debris, tools, clothing, or other materials shall be placed in the pipe. All fittings and pipes utilized in connection to the newly constructed water main shall be swabbed with chlorine solution and be kept free of debris and dirt at all times. Unless otherwise ordered, pipe shall be laid with the bell ends facing the direction of laying. Pigging of the water main may be required if foreign materials are entering the water main and/or bacteria tests fail multiple times.

Thrust restraint is required for all bends, caps, plugs, tees, and valves adjacent to tees. Thrust restraint shall be provided by use of concrete buttresses and wedge action restraining glands. Solid precast concrete blocks may be used in lieu of the poured buttresses when approved by the ENGINEER. When concrete blocks are used, they shall be stepped out to match the minimum dimensions required for poured concrete buttresses. Concrete buttresses shall be placed against firm, undisturbed ground. No wood or other materials will be allowed within blocking.

A minimum of 6 feet of tracer wire shall be extended beyond the end of the pipe, coiled and secured for future connections. The ends of the tracer wire shall be spliced to the wire of a six pound zinc anode and is to be buried at the same elevation as the water main. Tracer wire shall continue to run along sections of cast or ductile iron pipe, such as hydrant leads. Pipe tape shall be made of 4 mil thick non-detectable polyethylene tape. All tracer wire must pass a locating test. Locates shall be done in the presence of the Engineer prior to acceptance of respective pipe installation. All equipment necessary to make the test shall be provided by the Contractor.

Water main installed shallower than 5 ½ feet, as shown on the plans, shall be insulated with 2-inch thick extruded polystyrene foam insulation above and around the pipe where frost will penetrate the pipe envelope. Each sheet of 2-inch insulation shall equate to 1 foot of bury depth, to achieve the minimum 5 ½ feet of bury depth.

If water main casing is required due to sewer crossings, casing spacers will be required for installation of water main within casing pipe.

The new water main must pass a pressure test, leakage test, and disinfection testing prior to any connections to the OWNER's system. The OWNER will need to acquire an Operating permit prior to connection into the system and water services. The new main shall be tested in accordance with the Standard Specifications for Water and Sewer Construction in Illinois (latest edition) with the exception that the pressure test must retain 150 psi for a period of two (2) hours.

Trench embedment for water main shall be Class II material consisting of imported granular material (< ½" chips) and shall be properly compacted. Pipe embedment for water main shall be a minimum of 6" above the top of the pipe. Proper haunching technique shall be required. Backfill shall be imported granular material under roadways, driveways, and sidewalks wherever open trench techniques are used. All water main and appurtenances shall be inspected by the ENGINEER prior to backfill.

Method of Measurement and Payment

Water main will be measured for payment at the contract unit price per FOOT for WATER MAIN, of the specified diameter. This work shall include all labor, equipment and materials including, excavation, dewatering, bedding, testing, disinfection, cathodic protection, bends, fittings, restraint, insulation (as required), tracer wire, tracer wire terminal boxes, pipe tape, removal and disposal of surplus excavated material; and clean-up. The CONTRACTOR shall be responsible for chlorine residual field tests, lab fees associated with the water bacterial testing, and lab fees associated with any boil orders required for water shutdown. No additional payment will be made for coordination of boil order and shut down notifications or testing requirements.

Removal and/or abandonment of existing water main shall be considered incidental to the cost of water main.

Imported granular backfill under roadways, driveways and sidewalks shall be considered inclusive to the cost of water main wherever open trench techniques are used.

Any additional restoration required that is not shown on the plans, due to the method used for the installation of the water main, shall be considered inclusive to the cost of the water main.

Water main casing pipe will be measured for payment at the contract unit price per FOOT for WATER MAIN CASING PIPE. This work shall include all labor, equipment and materials for the installation of the casing pipe, spacers, and end seals.

Ductile iron fittings including tees and reducers shall be measured for payment at the contract unit price per EACH for the given fittings, of the specified size. Payment for bends and other fittings not listed in schedule of quantities will not be made, and considered inclusive to the pipe and connections to existing mains.

Connection to existing water main will be measured for payment at the contact unit price per EACH for CONNECTION TO EXISTING WATER MAIN. This work shall include any pipe (4"), bends, fittings, restraint, shutdowns, and testing required to make the connections.

Temporary caps and required reaction and/or blow-off valves (whips) required to construct the proposed water main and complete testing and/or to maintain water service shall be considered inclusive. It shall be the responsibility of the contractor to determine the required phasing for the installation of the water main. Abandonment of existing water mains by plugging the ends with plugs and/or concrete shall also be considered inclusive to water main installation.

**WATER MAIN, BORED AND JACKED (ALL SIZES)
 SANITARY SEWER, BORED AND JACKED (ALL SIZES)**

Description

This work shall consist of the installation of water and sanitary sewer utilities utilizing boring and jacking methods in accordance with the plans and details or as directed by the ENGINEER

Materials

- a. Carrier Pipe
 Water main carrier pipe shall be **restrained joint** PVC meeting the requirements within the water main specification. RieberLok gaskets are acceptable restrained joints.
 Sanitary sewer carrier pipe shall be **restrained joint** PVC meeting the requirements within the sanitary sewer specification. RieberLok gaskets are acceptable restrained joints.
- b. Steel Casing Pipe (Jacked & Bored)
 - 1. Steel Pipe
 Casing Pipe shall be 16" minimum diameter. Casing pipe shall be welded steel pipe, Grade B, meeting the requirements of ASTM A139 or as specified in Special Procedures - Division 01. The wall thickness of steel pipe shall conform to following:

Casing Diameter (inches)	Minimum Casing Pipe Wall Thickness (inches)	
	Under Roadways	Under Railroad
8 – 12	1/4 (0.250)	1/4 (0.250)
14 – 18	5/16 (0.3125)	5/16 (0.3125)
20	3/8 (0.375)	3/8 (0.375)
24	3/8 (0.375)	7/16 (0.4375)
30	3/8 (0.375)	1/2 (0.500)
36 – 42	3/8 (0.375)	9/16 (0.5625)
48	3/8 (0.375)	5/8 (0.625)

- 2. Casing Spacers
 - a. Casing spacers shall be as manufactured by Cascade Waterworks Manufacturing Company, or Ford Meter Box Co. Inc.
 - b. Casing spacers for pipe up to 6 inches in diameter shall be PVC, HDPE, or stainless steel with HDPE, nylon, or PVC runners. Larger sizes shall be stainless steel with HDPE, nylon, or PVC runners.
- 3. End Seals
 - a. Provide water-tight rubber end seals as manufactured by Cascade Waterworks Manufacturing Company.
 - b. Provide 12-inch concrete or brick and mortar bulkhead end seals.

Construction Requirements

- a. Boring and Jacking/Casing Pipe
1. Provide minimum of 72 hours' notice to the District Department of Transportation prior to commencing jacking and boring operations within or immediately adjacent to highway right-of-way.
 2. The joints of a steel casing shall be welded with a continuous circumferential weld. It shall be the responsibility of the Contractor to provide stress transfer across the joints, which is capable of resisting the jacking forces involved.
 3. The Contractor shall excavate the boring and receiving pits at the locations shown on the contract drawings. The Contractor shall provide any required sheeting, shoring, or bracing which is required to provide safe working conditions.
 4. Removal of water shall be considered inclusive.
 5. After the excavation is opened, the placing and jacking of the pipe shall follow immediately to avoid unnecessarily disturbing the stability of the embankment or roadbed.
 6. Boring shall be carried out with the proper equipment and procedure such that the carrier pipe and the casing pipe can be installed to the grades specified without disturbance to the adjacent earth.
 7. The jacking pit shall be of adequate length to provide room for the jacking frame, the jacking head, the reaction blocks, the jacks, auger rig, and the jacking pipe. The pit shall be sufficiently wide to allow ample working space on each side of the jacking frame. The depth of the pit shall be such that the invert of the pipe, when placed on the guide frame, will be at the elevation desired for the completed line. The pit shall be tightly sheeted and kept dry at all times. The jacking frame shall be designed so that it applies a uniform pressure over the entire pipe wall area of the pipe to be jacked.
 8. The reaction blocks shall be adequately designed to carry the thrust of the jacks to the soil without excessive soil deflection and in such a manner as to avoid any disturbance of adjacent structures or utilities. Adequate protective railings shall be provided at the top of the pit at all times.
 9. Hydraulic jacks shall be used in the jacking operation, and extreme care shall be taken to hold the pipe to exact line and grade. Excavation at the heading shall be advanced manually or with an auger and shall not exceed one foot ahead of the casing pipe.
 10. The leading section of the pipe shall be equipped with a jacking head securely anchored thereto to prevent any wobble or variation in alignment during the boring and jacking operation.
 11. The driving end of the pipe shall be properly protected against damage, and the intermediate joints shall be similarly protected by the use of sufficient bearing shims to properly distribute the jacking stresses. Any section of casing pipe showing signs of damage shall be removed and replaced, or repaired to the satisfaction of the Engineer.

12. The bore excavation shall not be made in excess of the outer dimensions of the pipe being jacked unless approved by the Engineer. Every effort shall be made to avoid loss of earth outside the jacking head. Excavated material shall be removed from the conduit as excavation progresses, with no accumulation of such material within the pipe.
 13. Should appreciable loss of soil occur during the boring and jacking operation, the voids shall be backfilled promptly to the extent practicable with soil-cement consisting of a slightly moistened mixture of 1 part cement to 2 parts sand mortar. This mixture shall be thoroughly mixed and rammed into place as soon as possible after the loss of soil occurs.
 14. The Contractor is responsible to safely mark and protect the excavation until the operation is complete and the excavation is backfilled.
 15. The pit excavations shall be backfilled with imported granular material and be inclusive to the jacking and boring operation.
- b. Installation of Carrier Pipe
1. Following the completion of the boring and jacking operation, the Contractor shall install the carrier pipe with spacers, and seal the casing ends.
 2. Casing spacers shall be installed per manufacturer's instructions and recommendations.

Method of Measurement and Payment

Measurement and payment for utility pipe jacking installation shall be per FOOT for STEEL CASING PIPE, BORED AND JACKED, of the diameter specified. Payment shall include the cost of the excavation pits, shoring, casing, casing spacers, end seals and backfill within the casing pipe. Payment for carrier pipe (water or sewer) shall be paid separately for the respective pipe.

This work shall include all labor, equipment and materials including, excavation, dewatering, bedding, removal and disposal of excavated material; backfill with imported granular material, compaction, and clean-up.

No partial payments shall be paid until the pipe(s) are successfully installed and approved.

WATER VALVES (ALL SIZES)

Description

This work shall consist of the installation of gate valves and valve boxes on the proposed water main improvements in accordance with the plans and details or as directed by the ENGINEER

Materials

a. Valves

The water valves shall be resilient-seated gate valves manufactured by **Clow, Model 2638** Resilient Wedge gate valve and mechanical joint conforming to ANSI/AWWA C509 or ANSI/AWWA C515 with O-ring stem seals rated for a maximum working pressure of 250 psi. Gate valves shall be cast iron and furnished with mechanical joints meeting the requirements of AWWA Standard C-111. The valves shall be counter-clockwise open and manufactured in the USA.

b. Joint Restraint Glands

All joints for valves shall be mechanical joints and installed with wedge action restraining glands, as noted in the water main special provisions. Stainless steel nuts and bolts shall be provided on all mechanical joints.

c. Valve Boxes

Valve Boxes shall be Tyler Union 666S Domestic three-piece (allowing bury depths of 5'-7'), screw type, with cover and the word "WATER" cast into the covers. Valve boxes shall be set straight and plumb. Unless noted on the plans all valves not placed in a valve vault shall have a valve box.

Valve adapters shall be Adaptor Inc. Gate Valve Adaptor. Valve adapters shall be provided on all auxiliary gate valves.

All valve boxes shall be provided with mud plugs, as approved by the Engineer. Mud plugs shall be installed at time of valve box installation.

Valve extension rods shall be installed and considered inclusive if the valve bury depth exceeds 6 feet in depth.

Method of Measurement and Payment

This work will be measured for payment at the contract unit price EACH for WATER VALVES AND VALVE BOX, of the specified diameter. This work shall include all labor, equipment and material including, excavation, bedding, testing, disinfection, protection; removal and disposal of surplus excavated material; backfill, and clean-up. All trench backfill associated with the aforementioned payment items shall be inclusive to the price of the items. Valve boxes, valve extensions, valve adapters, and mud plugs shall also be inclusive to the price of the valve.

**WATER SERVICE LINES, (ALL SIZES)
WATER SERVICE CONNECTION (ALL SIZES)
CORPORATION STOPS (ALL SIZES)
CURB STOP & BOX (ALL SIZES)**

Description

This work shall consist of the installation of new water service lines with corporation stops, water service saddles, and curb stops in accordance with the plans and details or as directed by the ENGINEER. Care shall be taken to minimally disturb homeowner's properties during service installation. All water services that cross under IL 84 shall be installed utilizing horizontal directional drilling techniques.

All work shall be performed in accordance with Sections 562 and 565 of the Standard Specifications, except as modified herein.

Materials

a. Copper Water Services

All water services shall be type "K" copper conforming to ANSI/AWWA C800. Water services shall be a minimum of 1 -inch diameter. The pipe shall be marked with the manufacturer's name or trade mark and a mark indicative of the type of pipe.

b. High Density Polyethylene (HDPE) Services (1.5" - 3")

HDPE shall be used for services 1.5" to 3" and shall meet the requirements of ASTM D2239 or D3035 and shall have a minimum working pressure of 160 psi.

c. Corporation Stop (Valve)

Corporation stops shall have AWWA inlet threads and compression outlet and conform to ANSI/AWWA C800 for copper service lines. Corporation stops shall be Local Public Agency standard AY McDonald Model 74704BQ.

The tap shall be made in the upper third of the main as close to forty-five degrees (45°) angle with the horizontal axis as is practical as shown on the detail. A tap into the top of the water main will not be permitted. Water service saddles are required on all service connections. Service saddles shall be rated for 250 psi, have a coated ductile iron body, 304 stainless steel strap and nitrile O ring gasket. Stainless steel nuts and bolts shall be provided on all water service saddles. Tapping saddles shall meet all applicable parts of ANSI/AWWA C800.

d. Curb Stop & Box

Curb stops shall be designed for use with copper service lines and shall conform to ANSI/AWWA C800. Curb stops shall be Local Public Agency Standard **AY McDonald Model 76104T**.

Curb boxes shall be Local Public Agency standard **AY McDonald Model 5612** (for use with ¾" or 1" curb stop) or **model 5613** (1.5" to 2" curb stops) Erie Pattern lid, threaded "Minneapolis" Pattern base, 5.5' - 6.5' extended length, 1" I.D. upper section, with shut-off rod.

Installation Methods

The CONTRACTOR shall take note of the plans and details which show the required installation methods. The required method of installation of the water services that cross under the highway is horizontal directionally drilled (HDD) installation. All labor, equipment, and materials necessary to excavate/drill and install the water main and appurtenances shall be inclusive to the unit price of the water service and no additional compensation shall be considered for selection of differing installation methods.

Construction Requirements

The actual sizes of existing service lines are not known and shall be field verified by the CONTRACTOR. For any services found to be 5/8-inch to 1-inch, the CONTRACTOR shall replace services with a new 1- inch copper service. For all services found to be 1-inch to 2 inches, the CONTRACTOR shall replace the service with a new services of the same size. For new service installation the CONTRACTOR is to maintain minimum bury requirements and install the new service to the location of the existing curb stop unless noted otherwise in the plans or directed otherwise by the ENGINEER and/or OWNER. The old curb stop is to be removed and each new service shall have a new stop. Service installation is not to occur until the main has passed all required testing and has been connected to the OWNER's system. The new curb stop shall have a curb box set at full extension and then be adjusted down to finish grade during restoration operations unless the adjustment is immediately necessary to allow for access. All corporation stops, curb stops, and connections shall be inspected by the ENGINEER prior to backfill. Water service taps and connections shall be completed by a licensed plumber, per State code.

CONTRACTOR shall notify resident/business prior to shutting off of water for switchover to the new service. A maximum of four (4) hours will be allowed for shut downs. The CONTRACTOR'S notification shall be written on a place card and affixed to the door of the residence/business. The place card must contain a timeframe for shut down, a contact number for emergencies, and instructions regarding clearing of air and debris for the reconnected service. Every effort shall be made to make verbal contact with each property owner prior to shut down. Coordination with the OWNER is also required.

In the event where an existing service is impacted during utility installation the CONTRACTOR shall excavate the corporation stop at the existing main to turn off the service or other approved method to stop the flow of water. If this method is not successful in stopping the flow then a shutdown of the main is necessary. This is only a last resort and shall be coordinated with the OWNER. The service is then to be replaced to the extents of the trench with new copper service and approved couplings. Repairs made as a result of unmarked services shall be repaired and paid for in accordance with Section 109.04 of the Standard Specifications. Utilities properly marked that are broken during construction shall be repaired in accordance with these specifications at the CONTRACTOR'S expense.

Method of Measurement and Payment

This work will be measured for payment at the contract unit price per FOOT for WATER SERVICES LINE BORED (ALL SIZES), per EACH for CORPORATION STOPS (ALL SIZES), per EACH for CURB STOP & BOX (ALL SIZES), and per EACH for WATER SERVICE CONNECTION. This work shall include all labor, equipment and materials including excavation, removal of existing services (if required), bedding, disinfection, protection; removal and disposal of surplus excavated material; and clean-up. No additional payment will be made for couplings and fittings required to connect to existing water services of different sizes. Removal of water service is considered inclusive.

FIRE HYDRANTS

Description

This work shall consist of furnishing all labor, materials and equipment necessary to remove fire hydrants, replace fire hydrants, and install fire hydrants with auxiliary valves, valve boxes and tees at locations shown on the Plans in accordance with AWWA Standard C502.

Materials

- a. All hydrants and applicable appurtenances associated with water main construction shall be LOCAL PUBLIC AGENCY standard **CLOW**, as follows:
 1. **Clow Valve Co.**, as follows: **Model F-2545 Medallion** fire hydrant, 5-1/2 foot trench depth minimum (**see plans for bury depths**), 6-inch horizontal M.J. or 6-inch vertical flange shoe (as indicated on the contract drawings), 1 1/2-inch pentagon operating nut (open left), national standard nozzles, painted red, no alternatives. All hydrants parts and extensions shall be original manufacturer's components.
 2. Contractor shall review required hydrant bury depths as indicated on the plans and verify proper hydrant depths prior to ordering and installation. Hydrant extensions shall not be allowed unless approved by the Village.

Construction Requirements

All new hydrants shall not be located closer than three (3) feet from any utility pole, tree, sign post, driveway, or other permanent structure that would impede access to the hydrant or reduce its visibility. No hydrant shall be placed closer than 2-1/2 feet from back of curb to the centerline of hydrant.

All new hydrants shall be plumb and blocking shall consist of masonry blocks extending from the hydrant to undisturbed soil and shall be so placed to form a barrier adjacent to the hydrant base top to counteract the pressure of water exerted thereon. Poured-in-place concrete shall not be used. Care shall be taken to insure that weep holes are not covered. The CONTRACTOR shall backfill a minimum of 1/2 cubic yard of washed 1/4" to 3/4" river stone at and around the base for proper drainage, per the detail. The backfill around the hydrant shall be inclusive to the cost of the hydrant. The hydrant base and auxiliary valve shall be set on precast concrete block to insure a firm bearing for the hydrant base.

Fire hydrants that are not in service are to be bagged, and coordinated with the Village and Fire Department.

Hydrant leads shall be 6" diameter (AWWA C-151) ductile iron pipe, Class 52 or greater of the appropriate length and a minimum of 24 inches. All hydrants shall be red in color.

Auxiliary valves shall be 6" and as specified herein. All hydrant appurtenances shall be installed with mechanical joint fittings, wedge-action restraining glands, stainless steel bolts.

The CONTRACTOR shall be responsible to coordinate with the OWNER to ensure that the new hydrant shall have the proper nozzle sizing, thread count, orientation, location, and valve operation direction prior to placement.

Tracer wire terminal boxes shall be installed at each hydrant, as shown in the detail.

Method of Measurement and Payment

The work will be measured for payment in place per EACH for FIRE HYDRANTS installed. Fire hydrant extensions, tracer wire boxes, embedment, trench backfill, and existing hydrant removal will not be measured for separate payment but shall be considered as incidental to the unit price per each fire hydrant installed.

PLUG WATER MAIN, ALL SIZES

Description

This work shall consist of installing a mechanical cap on the end of the future water main extensions, as indicated on the plans. The cap shall be restrained with the use of precast concrete thrust blocks, wedge action restraining glands, and rodded back to next fitting. Stainless steel nuts and bolts shall be provided on all mechanical joints. The end of the water main shall be marked with a vertical 4"x4" board and metal stake to within 6" of the surface.

Method of Measurement and Payment

This work will be measured for payment at the contract unit price per EACH for PLUG WATER MAIN, of the size specified. All temporary plugs required for water main staging shall be considered inclusive if not called out on plans.

DIVISION 600 – INCIDENTAL CONSTRUCTION

MANHOLES, ALL TYPES, ALL DIAMETERS

DOUBLE INLET, SPECIAL

INLET, SPECIAL

DRAINAGE STRUCTURE SPECIAL

INLET SPECIAL, NO. 3, 5, AND 6

INLETS, TYPE B, WITH SPECIAL FRAME AND GRATE

MANHOLES TO BE ADJUSTED

Description

This work shall consist of installing storm manhole, inlets, castings and grates, per the respective detail, and shall be in accordance with section of 602, 603, and 604 of the Standard Specifications.

Construction Requirements

- a. The manholes shall be precast concrete.
- b. The inlets shall be either precast concrete or cast-in-place concrete, unless specifically noted on the plans.
- c. The “Drainage Structure Special” storm structures shall be in accordance with IL DOT District 2 Detail 11.2. Manhole adjustments shall include the rebuilding the chimney section with EPP adjustment rings and replacing the casting as noted in the detail drawings.
- d. Inlet adjustments shall include removing and replacing the adjustment rings with EPP adjustment rings and replacing the casting as noted in the detail drawings.
- e. Adjustment Rings
 1. Expanded Polypropylene (EPP) Adjustment Rings
 - i. Adjustment rings shall be Local Agency Standard, Cretex Pro-Ring.
 - ii. Adjustment rings shall be manufactured from Expanded Polypropylene (EPP), compliant with ASTM D4819 and tested according to ASTM D3575.
 - iii. Rings shall be available in heights (thicknesses) which will allow final adjustment of the frame and cover or grate to within $\frac{1}{4}$ ” (one quarter inch) to $\frac{1}{2}$ ” (one half inch) of the specified final elevation.
 - iv. “Finish” Rings shall be provided with grooves on the lower surface and flat upper surface. “Finish” rings may also have a keyway on the upper surface of the inner diameter to facilitate installation of an “Angle” ring, where “Angle” ring is required.
 - v. “Angle” rings may either have an upper and lower keyway (tongue and groove) for vertical alignment and/or an adhesive trench on the underside.
 - vi. Any adhesive or sealant used for watertight installation of the manhole grade adjustment rings shall meet manufacturers specifications and the requirements of ASTM C-920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A and O Federal Specification TT-S-00230-C Type II, Class A .

- vii. Repair mortar and cementitious grout shall meet manufacturer's specifications.
2. Concrete Adjustment Rings
- i. Concrete adjustment rings will not be allowed.

Method of Measurement and Basis of Payment

This work shall be measured and paid at the contract unit price per EACH for the respective storm manhole or inlet of the type and size specified. Dewatering shall be inclusive to utility and structure installation. Payment will include the specified casting and final grade adjustment.

**COMBINATION CONCRETE CURB AND GUTTER, ALL TYPES
CONCRETE GUTTER, TYPE A (SPECIAL)**

Work shall be in accordance to Section 606 and the following:

Construction Requirements

Contractor shall ensure proper consolidation of the concrete to limit the amount of honeycombing at the curb face and back of curb. Excessive honeycombing will be required to be filled or removed and replaced as determined by the Engineer.

Contractor shall use a 1' or 2' smart level after concrete finishing to verify the flow line has a minimum of 0.5% slope for proper drainage. A Type B finish consisting of a broom finish will be required.

Expansion joints and dowel bars shall be required at inlet boxouts as indicated in the detail drawings. The joints shall be filled with a joint filler (tar sealant or self-leveling sealant).

Cold Weather Protection: When the official National Weather Service forecast for the construction area predicts a low below 35-degrees F, or if the actual temperature drops below 35-degrees F, concrete less than 72-hours shall be provided protection.

Temperature Control for Placement: Concrete can be placed when the air temperature is above 40-degrees F and rising, and concrete placement shall stop when the falling temperature reaches 40-degrees F or below, unless otherwise approved by Engineer. No concrete shall be placed if the official National Weather Service forecast in the next 24 hours predicts a low of 25-degrees F, or lower.

Fixtures in concrete shall be adjusted to conform to the finished surface pavement and will not be paid for separately. Adjustment of structures including, but not limited to, water and gas valves are anticipated to be adjusted. Old water valves stem boxes shall be removed to 2.5 feet below subgrade and filled, and this is considered incidental to work.

Method of Measurement and Payment

Combination curb and gutter will be measured and paid at the contract unit price per FOOT for COMBINATION CONCRETE CURB AND GUTTER, of the type specified.

Concrete gutter will be measured and paid at the contract unit price per FOOT for CONCRETE GUTTER, of the type specified.

Additional payment tie bars and utility adjustments will NOT be made.

DIVISION 700 – TRAFFIC CONTROL PLAN

Effective: January 14, 1999

Revised: January 13, 2017

Traffic Control shall be according to the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the National Manual on Uniform Traffic Control Devices for Streets and Highways, Illinois Supplement to the National Manual on Uniform Traffic Control Devices, these special provisions, and any special details and Highway Standards contained herein and in the plans.

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

Standards:

701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS – DAY ONLY
701501-06	URBAN LANE CLOSURE
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
BLR21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOAL HIGHWAYS
IL D2 40.1	TRAFFIC CONTROL FOR ROAD CLOSURE

General:

Where construction activities involve sidewalks on both sides of the street, the work shall be staged so that both sidewalks are not out of service at the same time.

Signs:

No bracing shall be allowed on post-mounted signs.

When covering existing Department signs, no tape shall be used on the reflective portion of the sign. Contact the District sign shop for covering techniques.

All regulatory signs shall be maintained at a 5 foot minimum bottom (rural), 7 foot minimum (urban).

Devices:

Drums with flashing reflector lights shall not be used during hours of darkness.

A minimum of 3 drums spaced at 4 feet shall be placed at each return when the sideroad is open.

On all standards, and the devices listed in Section 701 of the Standard Specifications, the device spacing shall be revised to the following dimensions:

Where the spacing shown on the standard is 25 feet, the devices shall be placed at 20 feet.

Where the spacing shown on the standard is 50 feet, the devices shall be placed at 40 feet.

Where the spacing shown on the standard is 100 feet, the devices shall be placed at 80 feet.

Flagger at Sideroads and Commercial Entrances:

Effective: August 1, 2011

Revised: December 29, 2015

Flaggers shall comply with all requirements and signaling methods contained in the Department's "Traffic Control Field Manual" current at the time of letting. The flagger equipment listed for flaggers employed by the Illinois Department of Transportation shall apply to all flaggers.

All workers and flaggers shall wear ANSI Class E pants and an ANSI Class 2 vest that in combination meet the requirements of ANSI/ISEA 107-2004 for Conspicuity Class 3 garments during hours of darkness.

In addition to the flaggers shown on applicable standards, on major side roads, flaggers shall be required on all legs of the intersection. Major side roads for this project shall be 94th Avenue and Cherry Street.

In addition to the flaggers shown on applicable standards, a flagger shall be required on high volume commercial entrances listed below. High volume commercial entrances for this project shall be Casey's.

When the mainline flagger is within 200 feet of an intersection, the side road flagger shall be required.

When the road is closed to through traffic and it is necessary to provide access for local traffic, all flaggers as shown on the applicable standards will be required. No reduction in the number of flaggers shall be allowed.

Revise Article 701.20(i) of the Standard Specifications to read:

"Signs, barricades, other traffic control devices, or flaggers required by the Engineer, over and above those shown in the contract documents, will be paid for according to Article 109.04."

The Contractor shall notify the Department via email at DOT.D2.TrafficNotice@illinois.gov. **This request shall be submitted a minimum of three weeks (21 days) and no earlier than four weeks (28 days) prior to the anticipated closure date to allow the State adequate time to re-route oversized loads.**

Signing and devices required to close the road, according to the Traffic Control for Road Closure detail and contained herein, shall be the responsibility of the Contractor. Detour signing required to detour traffic to alternate routes shall also be the responsibility of the Contractor. No detour shall be erected on Friday, Saturday or Sunday. The road shall not be closed until the detour signing is completely installed, verified, and ready to accept traffic.

The "ROAD CLOSED" sign on the Type III barricades shall be unobstructed and visible to traffic at all times. No equipment, debris, or materials shall be stored within 20 feet of the first set of Type III barricades, unless approved by the Engineer.

The Contractor shall not drive around the outside of the Type III barricades, but shall relocate the barricades temporarily for access. When it is necessary for the barricades to be moved for access, the Contractor shall move the devices into the left lane and/or left shoulder area behind barricades that are to remain in place. At no time shall the barricades be turned parallel to traffic flow for access purposes.

If a path becomes evident around the outside of the barricades, the Contractor shall be required to place additional Type III barricades to prevent driving around the existing barricades. Additional barricades shall be included in the cost of applicable Traffic Control Standards. Any damage caused by vehicles driving around the outside of barricades shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Department.

Road Closure – Closures within Closures: The road closure shall be completed using Type III barricades in compliance with Standards 701901, and signing according to Traffic Control for Road Closure detail. Two flashers shall be installed above each Type III barricade. The "ROAD CLOSED" (R11-2) or "ROAD CLOSED TO THRU TRAFFIC" (R11-4) signs shall be placed as shown in Standard 701901. Flashers shall be installed above all warning signs involving a night time road closure. If a portion of the road is completely closed between a side road and any entrances, the roadway will be kept open to local access in the other direction between that closure and the next road.

The Contractor shall be required to notify the Engineer and affected residents prior to a complete closure.

All cost involved in conforming with this provision shall be considered a part of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

Maintenance of Traffic: The traffic shall be maintained using the marked detour only during excavation and restoration work at the intersection of IL 84 and 94th Ave.

IL 84 shall remain open to traffic at all times. Contractor will reduce the roadway to one lane and provide flaggers during working hours. During this work, one-way traffic shall be maintained at all times during working hours, per standard 701501, and two-way traffic during non-working hours. When jacking and boring work is being completed adjacent to IL 84, and it is open to two-way traffic, a temporary concrete barrier shall be installed with pin connections and impact attenuators at ends. Flaggers shall be utilized with one-lane traffic during the installation and removal of the barrier wall and traffic control as needed.

Access to individual properties will need to be coordinated with property owners and maintained as required.

The Contractor shall be required to notify the Rock Island County Highway Department, the corresponding Township Commissioner, emergency response agencies (i.e.: fire, ambulance, police), school bus companies and the Department of Transportation (Bureau of Project Implementation) regarding any changes in traffic control.

The Contractor shall submit a maintenance of local traffic plan to the Engineer at the preconstruction meeting telling how local access will be maintained at each access location. This traffic plan will need to be approved by the Engineer before the any roadway is closed to traffic.

The Contractor shall have all lanes open Monday through Friday from 5:00 pm to 7:00 am and 3:30 pm Friday until 7:00 am Monday, unless prior approval is obtained from the Resident Engineer.

The Contractor shall be responsible for providing road closure updates and maps to the engineer to be shared with the news media describing work being performed and stages closed to traffic.

The work adjacent to IL 84 shall be completed using Traffic Control and Protection Standard 701501.

Measurement and Payment

All traffic control required to complete the proposed improvements, as indicated in the plans, details, and specifications, shall be paid for at the contract LUMP SUM price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL). Concrete barriers, impact attenuators, covering of excavations, and temporary aggregate backfill/transitions to maintain traffic and access are considered inclusive to Traffic Control and Protection, (Special).

MISCELLANEOUS SPECIAL PROVISIONS

SANITARY SEWER

CIPP SEWER LINING, 8”

Work shall be in accordance to the following:

Description

Work under this section shall cover all materials, equipment, labor and supervision necessary to install a continuous, tight fitting, watertight liner inside an existing sanitary sewer as indicated on the contract drawings and as specified herein.

All CIPP liners shall be installed prior to sidewalk, driveway, and pavement restoration, but after water main and sanitary sewer lateral work is completed.

Submittals

a. Product Data

1. Manufacturer's product literature, application and installation requirements for materials used in liner.
2. Manufacturer's product certification for materials used in liner.
3. Liner Pipe Thickness Design.
 - a. Liner Pipe Thickness Design shall be in accordance with Appendix XI of ASTM F1216 **for Fully Deteriorated Gravity Pipe Condition.** At a minimum, the followings variables shall be used by supplier/installer for liner thickness design:
 - 1) Height of Water Above Pipe = 8'
 - 2) Height of Soil Above Pipe = 12'
 - 3) Live Load Shall be AASHTO HS-20 for roadway and easement areas.
 - 4) Soil Type shall be clay with appropriate Modulus of soil reaction
 - 5) The minimum ovality of the host pipe shall be 5 percent
 - 6) The enhancement factor (K) shall not be greater than 7.0
 - 7) The minimum safety factor shall be 2.0
 - 8) The flexural modulus of elasticity shall be reduced 50% for Cured-in Place-Pipe to account for long-term effects and used in the design equation E_L or long-term product testing data shall be used.
 - b. **The minimum finished, installed liner thickness shall be no less than 6.0 millimeters, unless otherwise approved by Engineer.**
 - c. No liner shall be installed until it has been approved for installation by the Engineer.
 - d. No liner will be approved for installation until liner thickness calculations have been submitted and reviewed for conformance with the specifications and installation requirements.

b. Installer

As part of the Bid submittal, installer shall provide a list of projects, including total footage installed, location and contact information, completed with the Approved Material (minimum 100,000 feet).

Installer shall have completed a minimum of 100,000 L.F. of sewer lining to qualify for this project. Installer's employees must have proper training and hold current certifications for confined space entry to qualify for this project.

4. Installer shall submit proposed plan for bypassing sewage during liner installation.

c. Post Lining Submittals

1. Testing results per Testing and Acceptance Section.
2. CCTV video and reports (pre and post lining), per Testing and Acceptance. Televising & Data formatting shall be as required in the televising section of the sanitary sewer specifications.

Materials

Cured-in-place liners shall meet the applicable requirements for the type of material listed below.

1. Approved Lining Materials for the Rehabilitation of Existing Sanitary Sewer Mains.
 - a. Cured-in-Place-Pipe (CIPP) Resin Impregnated Flexible Felt Tube (RI) in accordance with **ASTM F1216**.
2. Other types of materials or processes for cured-in-place lining will not be considered.

Construction Requirements

Examine tapes of condition of pipe interior before starting work.

a. Installation Preparation

1. Cleaning.

- i. The Contractor shall remove all internal debris, roots, and mineral deposits from the sewer line which would interfere with the installation of the pipe liner.
- ii. The Contractor shall televise the sewer lines after cleaning and submit video inspection to the Engineer. If the television inspections show the cleaning to be unsatisfactory, the Contractor shall re-clean and re-televise the sewer line until it is acceptable to the Engineer. The cost for this work shall be included in the bid price per foot of sewer lining.

2. Inspection of the Sewer Line

- i. Inspection of pipelines shall be performed by experienced personnel trained in identifying breaks, obstacles and service connections by closed circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of the liner into the sewer line, and it shall be noted so that these conditions can be corrected. A digital video and suitable log shall be kept

for later reference by the Engineer. The cost for this work shall be included in the bid price per lineal foot of sewer lining.

3. Maintaining Sanitary Sewer Service

- i. The Contractor shall provide adequate equipment and facilities to provide bypass pumping for all elements of work requiring interruption to flow in the sanitary sewer. Provide backup or standby capabilities satisfactory to the Owner. The Contractor shall be responsible for damages to private or public property due to sewer backup while controlling sewage flow. Under no circumstances, will bypassing of untreated wastewater to any storm drainage facility or surface water course be allowed. The Contractor shall notify the Owner seven (7) days in advance of sewer sections which will not be useable in order to allow time for the Owner to notify residents. Interruptions of service shall be limited to eight (8) hours. Interruptions shall then be verified at least 24 hours in advance.
- ii. All costs for flow control, temporary pumping, etc., shall be considered inclusive to associated work performed under the contract unless otherwise provided in the Bid schedule.

4. Line Obstructions

- i. It shall be the responsibility of the Contractor to clear the line of all obstructions such as solids, roots, scale, mineral deposits, protruding service connections and collapsed pipe that will prevent the insertion of the liner. Pipe shall be completely cleaned to provide a minimum of 95% of internal diameter. The cost for this work shall be included in the bid price per lineal foot of sewer lining unless otherwise provided in the bid schedule.
- ii. If inspection reveals an obstruction that cannot be removed by conventional sewer cleaning equipment, then the Contractor shall make a point repair excavation to uncover and remove or repair the obstruction. Point repair excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be paid in accordance with Section 109.

5. Notifications

The Contractor shall contact the owner/residents within the project limits to inform them of temporary sewer service disconnections and any instructions or information deemed necessary for the successful performance of the work. 48-hour advance notice is required. The cost for this work shall be included in the contract price per foot of sewer lining.

b. Installation of the Liner

1. The completed liner shall be continuous over the entire length of each segment (manhole to manhole) and shall be free of defects such as foreign inclusions, dry spots, pinholes and delamination. The completed liner pipe

- shall be leak proof and a tight seal shall be provided between the liner and pipe wall.
2. The Contractor shall furnish and install the cured-in-place liner and re-establish sewer service in accordance with the procedure required by the supplier of the liner.
 3. Prior to commencing work, the Contractor shall furnish the Engineer with a copy of the supplier's recommended installation procedure and written certification that the liner material conforms to the requirements of these specifications.
 4. Preparation of the Liner
 - i. Resin Impregnation (CIPP):
 - a) Designate location where uncured resin in original containers and unimpregnated liner will be vacuum impregnated prior to installation. Installer shall allow the Engineer to inspect materials and "wet out" procedure.
 - b) Resin and catalyst system compatible with requirements of this method shall be used. Quantities of liquid thermosetting materials shall be to manufacturer's standards to provide lining thickness required.
 - c) Transport resin impregnated liner to site immediately prior to inversion in suitable light-proof container with temperature maintained below 40 degrees Fahrenheit (4 degrees Celsius).
 - ii. Insertion of Liner (CIPP):
 - a) Insert liner through an existing manhole or other access by means of an inversion process and application of hydrostatic head or steam sufficient to fully extend liner to next designated manhole or termination point or by means of winching the liner through the last pipe to the next designated manhole or termination point. Lubricant may be used.
 5. Curing Liner (CIPP)
 - i. After installation is complete, provide heat source and recirculation equipment. Equipment shall be capable of delivering hot water or steam throughout section to uniformly raise the skin temperature above that which is required to effectively resize and cure the liner.
 - ii. Provide heat source with suitable monitors to gauge temperature of incoming and outgoing water/steam supply. Place second gauge between impregnated liner and pipe invert at remote manhole to determine temperatures during cure.
 - a) Initial cure shall be complete when inspection of exposed portions of liner to be hard and round and remote temperature sensor indicates that temperature has reached required levels.
 - b) Cool hardened liner to temperature below 100 degrees F. Cool down by introduction of cool water or air into the liner. In the

case of CIPP care shall be taken in release of static head so that vacuum will not be developed that could damage newly installed liner.

6. Sealing Liner at Manholes

All liner ends at manholes shall be sealed with chemical grout, hydrophilic gaskets, or other methods approved by Engineer. Seal shall not leak. The cost for this work shall be included in the bid price per foot of sewer lining.

b. Service Connections

The Contractor shall be responsible for determining which service connections are active for reconnection purposes.

1. Locations:

a. Determine service connection locations from television inspection video tapes completed prior to lining.

2. Reinstatements:

a. Reinstall and reconnect service connections unless service connection is deemed to be inactive.

b. Reconnect services without excavation by television camera and cutting device that re-establishes services for minimum of 95% of the flow capacity.

c. Lateral reinstatements shall be brushed/buffed clean and free of any rough or jagged edges.

d. Sanitary services shall not be out of service for more than 8 hours during lining process.

e. Services shall be grouted to 36 inches to provide a water tight seal with chemical grout. Payment for lateral connection grouting shall be inclusive to reinstatement of laterals.

3. Manhole Connections

a. Reconstruct benches and channels in manholes with grout to match new invert elevations.

b. At the connection to the manhole, provide a watertight seal between the host pipe and liner pipe. All liner ends, shall be sealed with integral gaskets, chemical grout, or other methods approved by Engineer and shall not leak. The cost for this work shall be included in the bid price per foot of sewer lining.

c. Testing & Acceptance

The following tests shall be performed by the Contractor in the presence of the Engineer. The Contractor shall be responsible for providing all labor, materials and equipment for the testing.

1. Finished Liner:

a. Liner shall be continuous over entire length of insertion run and be as free as commercially practicable from visual defects such as foreign inclusions, lifts, tube coating, dry spots, pinholes and delamination.

- b. Liner shall conform to shape of pipe existing before installation and not be out of round by more than 15%.
 - 2. Liner Thickness:
 - a. Cured liner shall be accurately measured at a minimum of eight points at each manhole and average wall thickness shall not be less than final thickness specified. No single point may be less than 87.5% of the specified final thickness.
 - 3. Testing:
 - a. CIPP Liners
 - 1) Specimens tested shall be actual thickness of fabricated liner. Specimens shall be restrained field cured specimens via form pipe in manholes. A total of 2 test locations shall be required for this project.
 - 2) Test in accordance with ASTM D790, ASTM D638, and ASTM D5813. Acceptable test results shall meet the requirements of the liner design and product performance data submitted by installer/supplier.
 - 3) Specimens shall be machined flat
 - a) Make test with outer face in compression using 5 specimens.
 - b. Hydrostatic Testing
 - 1) Hydrostatic pressure (HPT) test shall be performed per IEPA requirements.
 - 2) The test pressure must be 35 psi above the highest point of the hydraulic grade line, which is assume to be 40 psi. The duration of the HPT must be a minimum of 2 hours. The test pressure shall not vary by more than +/- 5 psi for the duration of the test. The maximum quantity of makeup water (testing allowance) added into the CIPP undergoing the HPT to maintain pressure within +/- 5psi shall be determined by (Eq1) of AWWA C600-17.
 - 4. CCTV Examination:
 - a. Televis interior of pipe after completion of Work and provide digital video and inspection log to OWNER.
 - b. Use pan and tilt color camera to view the sewer service lateral connections.
 - 5. The cost for this work shall be included in the bid price per foot of sewer lining.
- c. Cleaning & Restoration

At completion of work, remove rubbish, debris, dirt, equipment and excess material from site. Clean and restore adjacent surfaces soiled by and during course of work.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per FOOT for CIPP LINER FOR SANITARY SEWER MAIN of the size specified. All costs associated with cleaning, obstruction/root removal, post-cleaning inspection, liner installation, re-instating laterals, sealing, testing, and post-lining inspection shall be included in the respective unit price bid item for associate liner diameters.

**SANITARY SEWER, ALL SIZES
SANITARY SEWER CONNECTION
SANITARY SERVICE CLEANOUT
ADJUST SANITARY SEWER CLEANOUT**

Description

Work shall be in accordance with the Standard Specification of Water and Sewer Construction in Illinois except the following:

Materials

- a. Polyvinyl Chloride Pipe (PVC) Sanitary Sewer
Four inch to 15-inch diameter pipe shall be Type PSM **SDR-26** and meet the requirements of ASTM D3034. Pipe over 15-inch diameter shall meet the requirements of ASTM F679, with PVC plastic as defined by ASTM D1784. Pipe shall be of the bell and spigot type and meet the requirements of ASTM D3034 Type PSM SDR-35. Pipe shall be green in color.
- b. Polyvinyl Chloride Pipe (PVC) Sanitary Laterals
Four inch to 15-inch diameter pipe shall be Type PSM SDR-35 and meet the requirements of ASTM D3034. Pipe shall be of the bell and spigot type and meet the requirements of ASTM D3034 Type PSM SDR-35. Pipe shall be green in color.
- c. Pipe Joints
Pipe joints shall be chemically welded conforming to ASTM D2564 or elastomeric seals (rubber gaskets) conforming to ASTM F477 and joint assembly conforming to ASTM D3212.
- d. Pipe Joints
Connections to existing sanitary sewer and laterals shall be completed with water tight couplings with shear rings.

Construction Requirements

- a. Trenching & Backfilling: Pipe embedment for sanitary sewer shall be Class IB material consisting of crushed stone (CA 16 chips). Proper haunching technique shall be required. Backfill shall be Class II backfill consisting of imported granular material and shall be properly compacted. All sanitary sewer and laterals shall be inspected by the ENGINEER prior to backfill.
- b. **Testing/Televising:** No air test will be required on the new sewer with active lateral installed. All lines not air tested shall be televised with all said televising costs included in the related sanitary sewer item. All mains to the next manhole on side streets will also be televised. When sewer line flows are above the minimum requirements (generally not more than 1/4 of the pipe diameter) or inspection of the complete periphery of the pipe is necessary to effectively conduct the inspection and sealing operations, one or more of the following methods of flow control shall be used at no extra cost to the Owner:

1. **Plugging or Blocking:** A sewer line plug shall be inserted into the line at a manhole upstream from the section to be inspected, tested and/or sealed. The plug shall be so designed that all or any portion of the sewage flows can be released. During the inspection portion of the operation, flows shall be shut off or substantially reduced in order to properly inspect the pipe at the invert. After the inspection is complete, flows shall be restored to normal or not more than 1/3 of the pipe diameter during the joint testing and joint sealing operation.
2. **Pumping and Bypassing:** Where pumping is required, in the opinion of the Engineer, to assure completion of the inspection and sealing work, the Contractor will be required to furnish pumping equipment, conduits, etc. All costs for flow control, temporary pumping, etc., shall be inclusive to testing and shall be included in the unit price bid for the related sanitary sewer item. No bypassed wastewaters will be allowed to be discharged to surface drainage facilities.
3. **Liability:** Contractor shall be liable for damages to private or public property, which may result from sewer flow control operations.
4. **Measurement for location of defects** shall be at the ground level by means of a meter device. Marking on cable or the like which would require interpolation for depth of manhole, etc., will not be allowed. Measurement meters shall be accurate to 0.2 of a foot. A measuring target (or the sealing packer) in front of the television camera shall be used as an exact measurement reference point and the meter reading shall show this exact location of the measurement reference point.
5. **Televising Digital Recording**
 - a. The television camera used for the inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall have a minimum resolution of 650 lines and shall provide a color picture, and have pan and tilt capabilities. Picture quality and definition shall be to the complete satisfaction of the Engineer and if unsatisfactory, equipment shall be removed and no payment made for unsatisfactory inspection. Provide to the Engineer three copies of a DVD (including viewing software) record of the inspection as well as a type written report of the inspection.
 - b. The televising camera shall be moved through the line in either direction at a uniform rate, stopping when necessary to insure proper documentation of the sewer's condition. In no case will the television camera move through the line at a speed greater than 30 feet per minute. If the camera is to be pulled through the line, the cable or device used to pull it shall in no way obstruct the quality of the televising.
 - c. During the inspection operation if the television camera will not pass through the entire sewer section, the CONTRACTOR shall re-setup his equipment in a manner so that the inspection can be performed from the opposite manhole. If on the re-setup the camera again fails to pass

through the entire sewer section, the inspection shall be considered terminated and no additional inspection work will be required. No additional payment for re-setup due to an obstruction in the sewer that does not allow the camera to pass shall be considered. No additional payment for overlapping sections of televised pipe shall be considered.

- d. All sags encountered in the system shall be documented.
- e. Televised data acquisition shall consist of:
 - 1) Computer recorded televising footage that utilizes software created specifically for sewer televising, and that is acceptable to the Engineer. NASSCO PACP compliant software is preferred, but not mandatory provided the data can be converted to the requirements listed in Section E.
 - 2) Recordings which shall include the following information:
 - a) Visual (On screen in corner):
 - 1 Footage of entire traverse through section of sewer.
 - 2 Date of television inspection.
 - 3 On-screen overview of entire section of sewer and adjoining manholes, with areas of degradation labeled.
 - 4 Sewer section and number.
 - 5 Current distance along reach (counter footage).
 - 6 Printed labels on container (CD) with location information, date, format information, and other descriptive information.
 - b) Audio Commentary:
 - 1 Date and time of television inspection, operator name, name of overlying or adjacent street, and manhole numbers.
 - 2 Verbal confirmation of sewer section and television direction in relation to direction of flow.
 - 3 Verbal description of pipe size, type, and pipe joint length.
 - 4 Verbal description and location of each service connection and pipe defect.
 - 5 Type of weather during inspection.
 - 3) Inspection logs made in the field and kept by the CONTRACTOR which shall include, but are not limited to, the following:
 - a) Date, time, city, street, basin, sewer section, reference manhole number, name of operator, inspector, and weather conditions.
 - b) Pipe diameter, pipe material, section length, depth of pipe, length, depth of pipe, length between joints, and corresponding videotape identification.
 - c) Location of each point of leakage.
 - d) Location of each service connection.

- e) Location of any damaged sections, nature of damage, and location with respect to pipe axis.
 - f) Still-frame photograph of each point of interest
 - 4) Deflection in alignment of grade of pipe.
 - 5) An estimate of the flow rate of observed infiltration points shall be made and recorded. In addition, other points of significance such as locations of building sewer laterals, joints, unusual conditions, roots, storm sewer connections, collapsed sections, presence of scale and corrosion, and other discernible features will be recorded.
 - 6) Televising that has been recorded in a digital format to provide a visual and audio record of the condition. This digital format data shall be saved on CD.
 - 7) Recordings that play back at the same speed that they were recorded.
 - 8) A complete recording of each line televised. A voice recording shall be provided with brief and informative comments on the sewer conditions.
 - 9) A summary report done by a computer containing the information in the inspection logs.
 - 10) Upon completion of the televising, 3 copies of each of the following shall be presented to the Engineer:
 - a) Digital recording in CD format with voice commentary.
 - b) Viewing software
 - c) A computer generated report summarizing the information in the inspection logs by basin and sewer section
 - d) The inspection logs of all areas televised containing clear labeling of all pipe degradation. This labeling system shall be arranged to allow ease of referencing with respect to the televised sections of pipe on the CD
6. Televising Database Requirements
- a. Contractor shall perform inspection work and provide Engineer with one (1) copy of the inspection database. Database shall be provided, formatted, or modified to meet the following requirements:
 - 1) The software can export to the standard Access database and be PACP compliant.
 - 2) The software can import from the standard PACP or Access database.
 - 3) The software will be compatible with Microsoft Windows XP, 2000 and Windows 7.
 - 4) The footage reading from the camera equipment shall be automatically entered into the Survey Log.
 - 5) Common information as specified by the PACP standard such as defects/defect codes, severity index code(1-5), pipe materials, survey purpose, defect location distance from starting manhole, defect camera position(clock), image paths for both MPEG and JPEG movies.

- 6) Severity Index for each defect will be coded on a 1-5 scale regardless of the standard software scoring system
 - 7) If the television inspection of an entire section (manhole to manhole) cannot be successfully performed from one manhole, a reverse setup shall be performed per PACP requirement as a second survey. Both of these inspections shall be displayed as a single report in Pipe Graphic and Tabular Reports.
 - 8) PACP Quick Rating Report will be available.
- b. Additionally, the required database format shall provide the following information at a minimum:
- 1) Inspection Sessions Table
 - a) Session ID (Unique Inspection Event)
 - b) Client, Inspected Street name
 - c) Inspection Date
 - d) Inspection Direction (StreamDir),
 - e) Manhole ID# From, Manhole ID# To
 - f) Main Material, Main Size
 - g) Televised Inspection Length,
 - h) General Location Info for Manhole From*
 - i) General Location Info for Manhole To*
 - j) Observed Flow during inspection
 - k) Quick Maintenance Rating – per PACP
 - l) Quick Structural Rating – per PACP
 - m) Inspection Company
 - n) Inspection Date
 - 2) Summary Inspection Observations Table
 - a) Data(Fault Observation) ID
 - b) Session ID (Inspection ID as listed from Session table above)
 - c) Fault Code (*Note Database shall include Fault Code table with code definitions)
 - d) Fault Code Text
 - e) Fault Comments
 - f) Fault Distance (Fault distance as measured from beginning manhole)
 - g) Severity Index or Score
 - h) Position of Default (clock)
 - i) JPEG file name & Directory Location
 - j) MPEG filename & Directory Location
 - k) Structural Grade (per PACP)
 - l) Service location – footage and clock position
 - m) Still-frame photos of all points of interest with image path
- c. Deflection Test: All polyvinyl chloride pipe installations shall be tested for deflection by using a rigid ball or mandrel and shall be performed in accordance with ASTM D2321 and without the use of mechanical pulling devices. Deflection may not be completed prior to 30 days of

placement of final backfill. Deflection may not exceed 7.5 percent after 30 days following placement of final backfill.

- d. Acceptance: If any of the tests are not met, determine the source of the problem and repair or replace all defective materials, at no additional cost to the Owner.
 - 1. Collapsed, fractured or pipe whose structural integrity is questionable as determined by the Engineer shall be replaced in a manner suitable to the Engineer.
 - 2. The sewer line shall be considered acceptable when all of the above provisions are complied with.
- e. Maintaining Sanitary Sewer Service
 - 1. Provide adequate equipment and facilities to provide bypass pumping for all elements of work requiring interruption to flow in the sanitary sewer. Provide backup or standby capabilities satisfactory to the Owner. Be responsible for damages to private or public property due to sewer backup while controlling sewage flow.
 - 2. Under no circumstances will bypassing of untreated wastewater to any storm drainage facility or surface water course be allowed.
 - 3. Notify the Owner seven (7) days in advance of sewer sections, which will not be useable in order to allow time for the Contractor to then notify residents. Interruptions shall then be verified at least 24 hours in advance.
 - i. Interruptions of service shall be limited to four (4) hours.
 - ii. All existing sanitary laterals shall be permanently reconnected within two days after initial disconnection of the main line sewer bypass. These existing sanitary laterals shall be temporarily reconnected if the permanent reconnection cannot be accomplished immediately after disconnection.
 - 4. All costs for flow control, temporary pumping, etc., shall be inclusive to the unit price bid for sanitary sewer.
 - 5. All costs associated with connecting proposed sewers to existing sewers or manholes, manhole removal and abandonment, and sanitary sewer removal/abandonment, shall be included in the unit price bid for sanitary sewer. All connections to existing sewer shall be made with water tight couplings with shear rings.
- f. Sanitary sewer connection shall include the connections to existing sewer mains with the use of water tight couplings with shear rings.
- g. Sanitary Sewer Laterals
 - 1. Sanitary sewer laterals shall be 4" diameter minimum for residential. Commercial and industrial laterals will be replaced with same size as existing, typically 6" diameter.

2. Sanitary sewer cleanouts will be installed at lateral bends and/or at the connection to the existing sanitary sewer laterals, per the details. Sanitary sewer cleanouts will be constructed of the same size as the service lateral.
3. Connections to existing laterals shall be made with the use of water tight couplings with shear rings.
4. All sanitary sewer laterals and connections shall be inspected by the ENGINEER prior to backfill.

h. Adjusting Sanitary Lateral Cleanout

1. Contractor shall adjust and replace the riser pipe as required to bring the cleanout to final grade. All lateral cleanouts shall have a cast iron casting installed over the PVC riser and cap, per the detail.

Method of Measurement and Basis of Payment

Sanitary sewer and service laterals will be measured and paid at the contract unit price per FOOT for SANITARY SEWER, of the material and diameter specified. Payment shall include all removal or abandonment of existing sanitary sewer/laterals, dewatering, bedding, backfill, bends, wye, tees, risers, temporary or permanent connections to existing sewer or manholes, testing, and all other fittings and appurtenances required to complete the work.

Sanitary sewer connection will be measure and paid at the contract unit price per EACH for SANITARY SEWER CONNECTION.

Sanitary sewer cleanouts (including riser pipe) will be measured and paid at the contract unit price per EACH for SANITARY SERVICE CLEANOUT.

Sanitary sewer cleanout adjustments will be measured and paid at the contract unit price per EACH for ADJUST SANITARY SEWER CLEANOUT. Payment shall include removal, excavation, rise pipe replacement, PVC cap replacement, casting installation, and backfill.

**MANHOLES, SANITARY 4-DIAMETER, TYPE 1 FRAME, CLOSED LID
DROP SANITARY MANHOLE, WITH TYPE 1 FRAME, CLOSED LID
SANITARY MANHOLES TO BE ADJUSTED**

Description

Work shall be in accordance with the Standard Specification of Water and Sewer Construction in Illinois and the following:

Materials

- a. Precast Concrete Manholes
 1. Precast concrete manhole sections shall have a minimum inside diameter of 48 inches. The cone section shall be the eccentric type with a minimum clear opening of 24 inches. Compressive strength of the concrete shall be 4,000 psi and shall conform to ASTM C478. Wall thicknesses of manholes will vary with diameter in conformance with ASTM C76, Class B concrete tongue and groove joint pipe. Larger

diameter manholes (7 feet +) shall have wall thickness a minimum of one-twelfth the inside diameter of the manhole as specified in ASTM C478.

2. Steel reinforcement (sq. in./lin. ft.) shall not be less than 0.0025 times the inside diameter of the manhole in inches.

b. Steps

Steps shall be constructed of a 1/2 inch diameter, Grade 60 reinforcing steel bar conforming with ASTM A615 completely encased in polypropylene conforming with ASTM D4101 to obtain a minimum thickness of 1-1/8 inch and minimum width of 12 inches. They shall be securely and permanently set in the manhole wall. Steps shall be set at 16 inches on center and have a 5-3/4 inch projection from the wall. Steps shall conform with ASTM C478.

c. Frames, Covers, and Gratings

1. Frames, covers and gratings shall be of the type and duty as shown in the Contract Documents. Iron castings shall conform to ASTM A48, Class 20. All castings shall be true to pattern in form and dimensions, free from faults, sponginess, cracks, blow holes, and other defects affecting their strength.
2. The standard castings for sanitary sewer manholes shall have concealed pick holes, be self-sealing gasketed lids, 24-inch in diameter, and bare the word "SANITARY" on them.
3. Where bolted lids are specified on the contract drawings they shall be watertight manhole frames with bolted lids.
4. Where low profile castings are specified on the contract drawings, they shall be (5-inch maximum casting) with Type B self-sealing, gasketed lid.

d. Sanitary Sewer Manhole Joint Materials

1. Sanitary sewer manhole joint materials shall be rubber gasket material and conform to ASTA C443.
2. External joint wrap shall be used and shall conform to the requirements of ASTM C877.

e. Waterstop Seals & Pipe Connections

Water-stop seals shall be flexible, watertight, rubber wedge ring or O-ring compression seals for pipe entrance holes conforming to ASTM C 923.

f. Adjustment Rings

1. Expanded Polypropylene (EPP) Adjustment Rings

- i. Adjustment rings shall be Local Agency Standard Cretex Pro-Ring.
- ii. Adjustment rings shall be manufactured from Expanded Polypropylene (EPP), compliant with ASTM D4819 and tested according to ASTM D3575.

- iii. Rings shall be available in heights (thicknesses) which will allow final adjustment of the frame and cover or grate to within $\frac{1}{4}$ " (one quarter inch) to $\frac{1}{2}$ " (one half inch) of the specified final elevation.
- iv. "Finish" Rings shall be provided with grooves on the lower surface and flat upper surface. "Finish" rings may also have a keyway on the upper surface of the inner diameter to facilitate installation of an "Angle" ring, where "Angle" ring is required.
- v. "Angle" rings may either have an upper and lower keyway (tongue and groove) for vertical alignment and/or an adhesive trench on the underside.
- vi. Any adhesive or sealant used for watertight installation of the manhole grade adjustment rings shall meet manufacturers specifications and the requirements of ASTM C-920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A and O Federal Specification TT-S-00230-C Type II, Class A .
- vii. Repair mortar and cementitious grout shall meet manufacturer's specifications.

2. Concrete Adjustment Rings

- ii. Concrete adjustment rings will not be allowed.

g. Sanitary Sewer Manhole Chimney Seals

1. Sanitary sewer manhole chimney seal shall be internal or external type, rubber sleeve. The sleeve and extension shall have a minimum thickness of 3/16 inches and shall be extruded or molded from a high grade rubber compound conforming to the applicable requirements of ASTM C923, with a minimum 1,500 psi tensile strength, maximum 18 percent compression set and hardness (durometer) of 48+/-5. The sleeve shall be double pleated with a minimum unexpanded vertical height of 8 inches and be capable of vertical expansion of not less than 2 inches when installed.
2. The bands used for compressing the sleeve and extension against the manhole shall be fabricated from 16 gauge stainless steel conforming to ASTM A240 Type 304. All screws, bolts or nuts used on this band shall be stainless steel conforming to ASTM F593 and F594, Type 304.
3. Sanitary sewer manhole chimney seal shall provide a watertight seal from 2 inches above the bottom of the casting to 2 inches below the top of the manhole cone section or flat top.

Construction Requirements

a. Manholes & Adjustments

1. All manhole adjustments shall include adjustment rings (as necessary), new casting, and adjusted per the details.
2. Contractor shall inspect manholes and determine manhole adjustment requirements. Some manhole adjustments will be minor and may require the use of a low-profile casings. Some manholes will be major and require the removal and replacement or modification of the cone and/or barrel sections with the lowered roadway profile.

3. Castings from removed manholes and manhole adjustments shall be salvaged to the Village.
- b. Drop Connections
1. The outside drop assembly shall consist of a tee or wye connecting to the inflowing sewer, a drop pipe of the same diameter as the inflowing sewer, and a 90-degree bend at the bottom, all encased in concrete.
 2. Ductile iron pipe used for the drop connection need not be encased in concrete if the drop is free of joints between the 90-degree bend and the tee.
- c. Testing
2. Sanitary sewer manholes shall be tested in accordance with the requirements specified in the Standards Specifications Committee (SSC), Standard Specifications for Water and Sewer Main Construction in Illinois, Current Edition.
 - i. Vacuum test shall conform to the requirements of ASTM C1244ae1 - Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill, Current Edition.
 - ii. Provide all necessary equipment, tools, labor supervision required for testing.
 - iii. Testing shall be made in the presence of the Engineer or Owner's Authorized Representative. Provide written documentation of successful completion.
 3. Acceptance: If any of the tests are not met, determine the source of the problem and repair or replace all defective materials, at no additional cost to the Owner.
 - i. Collapsed, fractured or components whose structural integrity is questionable as determined by the Engineer shall be replaced in a manner suitable to the Engineer.
 - ii. The manhole shall be considered acceptable when all of the above provisions are complied with.

Method of Measurement and Basis of Payment

Sanitary sewer manholes and drop manholes will be measured and paid at the contract unit price per EACH for MANHOLES, SANITARY 4-DIAMETER, TYPE 1 FRAME, CLOSED LID and DROP SANITARY MANHOLE, WITH TYPE 1 FRAME, CLOSED LID, of the diameter specified. Payment shall include all bypass pumping (if necessary), temporary connections, dewatering, bedding, backfill, outside drops, temporary or permanent connections to existing sewer, testing, and all other materials/labor required to complete the work. Removal of existing manholes where new manholes will be installed is considered inclusive.

Manhole adjustments will be measured and paid at the contract unit price per EACH for SANITARY MANHOLES TO BE ADJUSTED. This includes both minor and major adjustments as described and replacement of the sanitary sewer castings.

RETAINING WALL REMOVAL

Description

The work entails removal of a various types of retaining walls, including segmental block, concrete, brick, masonry, and rock retaining wall, approximately 1'-4' in height.

Construction Requirements

Contractor shall remove any segmental block walls with care, and salvage the blocks to the property owner on wooden pallets and place them in a location as determined by the property owner.

Method of Measurement and Basis of Payment

Retaining wall removal shall be measured and paid at the contract unit price per SQUARE FEET for RETAINING WALL REMOVAL. Payment shall include removal and disposal of retaining walls or removal or salvaging block walls to property owners. Footing removal shall be considered inclusive.

REMOVE AND REPLACE EXISTING BLOCK WALL

Description

The work entails removal and reinstallation of segmental block landscaping walls/edgers, approximately 1'-2' in height, as required to facilitate construction.

Construction Requirements

Contractor shall remove segmental block walls with care, store blocks on wooden pallets, construct a new aggregate base (per wall detail), and re-install the block walls.

Method of Measurement and Basis of Payment

Retaining wall removal and replacement shall be measured and paid at the contract unit price per SQUARE FEET for REMOVE AND REPLACE EXISTING BLOCK WALL.

BRICK PAVER REMOVAL AND REPLACEMENT

Description

The work includes removing and reinstalling brick paver sidewalk as shown on the plans.

Construction Requirements

The Contractor shall remove the pavers and store in a location as approved by the property owner. Contractor shall install the pavers on a 4" aggregate base with a 1'-2" layer of leveling sand/chips. Any extra pavers shall be salvaged to the property owner.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per SQUARE FOOT for BRICK PAVER REMOVAL AND REPLACEMENT.

FENCE REMOVAL AND REINSTALLATION

Description

The Contractor shall remove and reinstall fences to facilitate construction as required. Any damage to the fences shall be replaced by the Contractor at no additional cost.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per FOOT for FENCE REMOVAL AND REINSTALLATION.

STEEL RAILING REMOVAL

Description

The Contractor shall remove railing along box culverts headwalls, immediately prior to installation of new pedestrian railing/fence. Sidewalk shall be closed during the removal of the railing and the new railing/fence shall be installed the same day. Sidewalk removal shall not be opened until the railing/fence is reinstalled.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per FOOT for STEEL RAILING REMOVAL. Any temporary railing or fencing required after the removal shall be considered inclusive.

PERIMETER EROSION BARRIER, ROLLED EXCELSIOR

Description

This work shall consist of constructing, maintaining, removing and disposing of a rolled excelsior perimeter erosion barrier as part of the project's temporary erosion control system.

Work shall be in accordance with section of 280 of the Standard Specifications and the following:

Materials

The rolled excelsior shall consist of a polypropylene multi-filament woven netting sealed with metal clips or knotted at the ends. The filler material shall be 70% bark-free hardwood mulch ground at 1.5" and 30% bark-free hardwood mulch ground fine. The density shall be a minimum of 3.3 pounds per cubic foot based on a moisture content of 18% at manufacturing. The netting material shall retain 89% of its strength after 500 hours of exposure to sunlight. The maximum opening in the netting shall not exceed 1x1 mm in a tubular knit design.

Construction Requirements

The rolled excelsior logs shall be installed according to the manufacturer's specifications. Logs shall be staked into the ground as required to prevent the migration of sediments or the washing away of the excelsior log.

Maintenance

The Contractor shall inspect all rolled excelsior logs immediately after each rainfall and at least daily during prolonged rainfall. The Contractor shall immediately correct any deficiencies.

The Contractor shall also make a daily review of the location of rolled excelsior logs in areas where construction activities have altered the natural contour and drainage runoff to ensure that the rolled excelsior logs are properly located for effectiveness. Where deficiencies exist as determined by the Engineer, additional rolled excelsior logs shall be installed as directed by the Engineer.

Damaged or otherwise ineffective rolled excelsior logs shall be repaired or replaced promptly.

Sediment deposits shall either be removed when the deposit reaches half the height of the rolled excelsior log or a second rolled excelsior log shall be installed as directed by the Engineer.

The rolled excelsior log shall remain in place until the Engineer directs it to be removed. After the rolled excelsior log removal, the Contractor shall remove and dispose of any excess sediment accumulations, dress the area to give it a pleasing appearance, and cover with vegetation all bare areas according to the contract requirements.

The removed rolled excelsior logs may be used at other locations provided the netting and other material requirements continue to be met to the satisfaction of the Engineer.

During the construction operation when any loose material is deposited in the flow line of ditches, gutters or drainage structures so the natural flow of water is obstructed, the material shall be removed at the close of each working day.

At the conclusion of the construction operations all drainage structures shall be free from all dirt and debris. This work will not be paid for separately but shall be considered included in the unit cost per foot of PERIMETER EROSION BARRIER, ROLLED EXCELSIOR.

Method of Measurement and Basis of Payment

This work will be paid for at the contract unit price per FOOT for PERIMETER EROSION BARRIER, ROLLED EXCELSIOR. The unit price shall include all work and materials necessary to properly install the barrier, maintain the rolled excelsior perimeter erosion barrier throughout the project, and to remove and dispose of the used materials at the completion of the project.

RELOCATE EXISTING LIGHT POLE

Description

This work shall consist of removing, salvaging, storing, relocating, and re-wiring existing light poles at the property of 910 N High St Contractor to coordinate storage and new location with property owner. Any damage to the poles shall be replaced by the Contractor at no additional cost.

Method of Measurement and Basis of Payment

This work will be measured and paid at the contract unit price per EACH for RELOCATE EXISTING LIGHT POLE.

**CONCRETE WINGWALL REMOVAL
CONCRETE HEADWALL REMOVAL
SPECIAL STRUCTURE
DRAINAGE STRUCTURE REPAIR
INLET BOX, SPECIAL
CONNECT TO BOX CULVERT
BOX CULVERT REMOVAL
DRAINAGE STRUCTURE RECONSTRUCTION (SPECIAL)
TRENCH DRAIN**

Description

This work shall consist of modifying existing box culverts and special drainage structures along the highway. Work shall be in accordance with section of 602, 603, 604, and 605 of the Standard Specifications.

Materials

- a) Cast-in-place Concrete shall be class SI according to applicable portions of Section of 503
- b) Reinforcement bars shall be epoxy coated according to applicable portions of Section 508

Construction Requirements

11th Street Speical Structure – Work consists of the removal of the culvert wingwalls in order to construct a 9'x6' (minimum) "Special Structure" to connect proposed storm sewers and existing box culvert. The proposed structure shall be either cast-in-place concrete. Structure shall be built in general compliance with detail "Special Structure Detail" in the plans.

Drainage Structure Repair – Work consists of eliminating a curb inlet that "dropped" into the top of a concrete box culvert. The Contractor shall remove the inlet top and patch the concrete box culvert with cast-in-place concrete. Deformed rebar shall be utilized to tie the existing box culvert to concrete patch and be continuous through the concrete patch. Structure shall be built in general compliance with detail "Drainage Structure Repair" in the plans.

Drainage Structure Reconstruction (Special) – Work consists of removing specified length of existing box culvert and pouring new box culvert end cast-in-place with appropriate pipe openings. It shall also include installing a new opening in the top of box culvert along with casting frame and lid. Structure shall be built in general compliance with detail "Drainage Structure Reconstruction (Special)" in the plans.

Trench Drain – Work consists of installing a cast iron trench drain and grates behind the back-of-sidewalk at specified driveways on the plans. It shall also consist of the 6" concrete encasement around the sides and bottom of the trench drain according to the detail "Trench Drain". Trench drain shall be Neenah R-4996-C with Type C Grate or approved equivalent. Size of trench drain outlets shall be as specified on the plans. Trench drain shall be built in general compliance with detail "Trench Drain" in the plans.

Inlet Box, Special – Contractor shall install a 6'x4' precast or cast-in-place storm structure, similar to District 2 Inlet Special No. 3, but without the open throat inlet. If the structure is pre-cast, it shall be cast without the open throat.

Contractor shall connect to existing box culverts with the use of concrete collars. For connecting Storm Structure #K4 to the existing box culvert, connection should be made according to "Special Structure Connection to Box Culvert Detail" as shown on the plans. Epoxy coated tie bars shall be installed in drilled holes along the vertical faces of the existing box culvert at 12" centers. Epoxy coated bars shall be No. 4 bar and shall be installed with an approved nonshrink grout or chemical adhesive. Holes shall be blown clean and dry prior to placing the grout or adhesive.

Contract shall remove portions of existing box culverts in order to facilitation construction. Saw-cutting of the existing structure in straight lines shall be required. If the contract damages the existing box culverts, the Contract shall repair the box culverts at no additional cost.

Method of Measurement and Basis of Payment

Wingwall removal shall be measured and paid at the contract unit price per EACH for CONCRETE WINGWALL REMOVAL. No additional compensation will be made for variation in wingwall thickness, height, length, or amount of reinforcement in the existing wingwall.

Concrete headwall removal shall be measured and paid at the contract unit price per EACH for CONCRETE HEADWALL REMOVAL. No additional compensation will be made for variation in headwall thickness, height, length, or amount of reinforcement in the existing headwalls.

Special structure construction shall be measured and paid at the contract unit price per EACH for SPECIAL STRUCTURE. This work shall include all necessary connection to proposed storm sewer and concrete collars.

Drainage structure repair shall be measured and paid at the contract unit price per EACH for DRAINAGE STRUCTURE REPAIR.

Drainage structure reconstruction shall be measured and paid at the contract unit price per EACH for DRAINAGE STRUCTURE RECONSTRUCTION (SPECIAL).

Trench drain shall be measured and paid at the contract unit price per FOOT for TRENCH DRAIN.

Inlet box, special shall be measured and paid at the contract unit price per EACH for INLET BOX, SPECIAL.

Connections to existing box culverts shall be measured and paid at the contract unit price per EACH for CONNECT TO BOX CULVERT. Unit price shall include, but not limited to, all labor, equipment, and materials required to make connections to existing box culverts. No additional compensation will be made for variations in method of connections.

Box culver removal shall be measured and paid at the contract unit price per FOOT for BOX CULVERT REMOVAL.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue, East; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: PORT BRYON (IL1610550)

Permit Issued to:

Village of Port Bryon
120 S. Main Street, P.O. Box 438
Port Bryon, IL 61275

PERMIT NUMBER: 0770-FY2020

DATE ISSUED: May 26, 2020

PERMIT TYPE: Water Main Extension

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the "Environmental Protection Act", Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM: MSA Professional Services, Inc.

NUMBER OF PLAN SHEETS: 48

TITLE OF PLANS: "IL84 Sidewalk and Water Main Reconstruction"

PROPOSED IMPROVEMENTS:

The installation of approximately 894 feet of 6-inch and 2,961 feet of 8-inch water main.

ADDITIONAL CONDITIONS:

1. A lead informational notice must be given to each potentially affect residence at least 14 days prior to the permitted water main work. The notification must satisfy the requirements of Section 17.11 of the Environmental Protection Act. If notification is required to a residence that is a multidwelling building, posting at the primary entrance way to the building shall be sufficient. If the community water supply serves a population less than 3,301, alternative notification means may be utilized in lieu of an individual written notification. Refer to Section 17.11 for alternative notification requirements. Enclosed is suggested language for the notice. If this project involves water service to a significant proportion of non-English speaking consumers, the notification must contain information in the appropriate language regarding the importance and how to obtain a translated copy. The Responsible Operator in Charge of the community water system is responsible for preparing the notice. A copy of the notice used must be submitted to the Agency with the Application for Operating Permit.
2. All water mains shall be satisfactorily disinfected prior to use pursuant to Ill. Adm. Code, Title 35, Subtitle F, Section 602.310. Two consecutive sets of samples collected at least 24 hours apart must show the absence of coliform bacteria. The samples must be collected from every 1,200 feet of new water main along each branch and from the end of the line. An operating permit must be obtained before the project is placed in service.
3. There are no further conditions to this permit.

DCC:CLB

cc: MSA Professional Services, Inc.
Rockford Regional Office
IDPH/DEH – Plumbing and Water Quality Program



David C. Cook, P.E.
Manager, Permit Section
Division of Public Water Supplies

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Agency Act (Illinois Compiled Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Division of Water Pollution Control, Air Pollution Control, Public Water Supplies and Land Pollution Control. Special conditions may also be imposed by the separate divisions in addition to these standard conditions.

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year after this date of issuance unless construction or development on this project has started on or prior to that date.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentation of credentials:
 - a. to enter at reasonable times the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit.
 - b. to have access to and copy at reasonable times any records required be kept under the terms and conditions of this permit.
 - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit.
 - d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants.
 - e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the permits upon which the permitted facilities are to be located;
 - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
 - c. does not release the permittee from compliance with the other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
 - e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability directly or indirectly for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. These standard conditions shall prevail unless modified by special conditions.
7. The Agency may file a complaint with Board of modification, suspension or revocation of a permit:
 - a. upon discovery that the permit application misrepresentation or false statements or that all relevant facts were not disclosed; or
 - b. upon finding that any standard or special conditions have been violated; or
 - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

Lead Informational Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Dear Water Customer:

Today's Date: _____

Our water system will soon begin a water line maintenance and/or construction project that may affect the lead content of your potable water supply. Lead, a metal found in natural deposits, is harmful to human health, especially young children. The most common exposure to lead is swallowing or breathing in lead paint chips and dust. However, lead in drinking water can also be a source of lead exposure. In the past, lead was used in some water service lines and household plumbing materials. Lead in water usually occurs through corrosion of plumbing products containing lead; however, disruption (construction or maintenance) of lead service lines may also temporarily increase lead levels in the water supply. This disruption may be sometimes caused by water main maintenance/replacement. As of June 19, 1986, new or replaced water serviced lines and new household plumbing materials could not contain more than 8% lead. Lead content was further reduced on January 4, 2014, when plumbing materials must now be certified as "lead-free" to be used (weighted average of wetted surface cannot be more than 0.25% lead).

The purpose of this notice is for informational purposes only. While it's not known for certain whether or not this particular construction project will adversely affect the lead (if present) plumbing in and outside your home, below describes some information about the project and some preventative measures you can take to help reduce the amount of lead in drinking water.

Project Start Date: _____ Project expected to be completed by: _____

Project location and description:

What you can do to reduce lead exposure in drinking water during this construction project:

Run your water to flush out lead. If the plumbing in your home is accessible; you may be able to inspect your own plumbing to determine whether or not you have a lead service line. Otherwise, you will most likely have to hire a plumber.

- If you do not have a lead service line, running the water for 1 – 2 minutes at the kitchen tap should clear the lead from your household plumbing to the kitchen tap. Once you have done this, fill a container with water and store it in the refrigerator for drinking, cooking, and preparing baby formula throughout the day.
- If you do have a lead service line, flushing times can vary based on the length of your lead service line and the plumbing configuration in your home. The length of lead service lines varies considerably. Flushing for at least 3 – 5 minutes is recommended.

Use cold water for drinking, cooking, and preparing baby formula. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.

Look for alternative sources or treatment of water. You may want to consider purchasing bottled water or a water filter that is certified to remove "total lead".

Clean and remove any debris from faucet aerators on a regular basis.

Do not boil water to remove lead. Boiling water will not reduce lead.

Purchase lead-free faucets and plumbing components.

Remove the entire lead service line.

Test your water for lead. Call us at: _____ to find out how to get your water tested for lead.

While we do not do the testing, we can provide a list of laboratories certified to do the testing. Laboratories will send you the bottles for sample collection. Please note that we are not affiliated with the laboratories and they will charge you a fee.

- If test results indicate a lead level above 15 ug/L, bottled water should be used by pregnant women, breast-feeding women, young children, and formula-fed infants.

MAR 06 2020

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 2020-65088

PERMIT NO.: 2020-HB-65088

BUREAU ID: W1610550009

FINAL PLANS, SPECIFICATIONS, APPLICATION
AND SUPPORTING DOCUMENTS

DATE ISSUED: February 26, 2020

PREPARED BY: MSA Professional Services

SUBJECT: PORT BYRON - Port Byron-IL-84 Sidewalk and Water Main Reconstruction
(Port Byron Sewage Treatment Plant) - Sanitary Sewer Permit

PERMITTEE TO CONSTRUCT, OWN, AND OPERATE

Village of Port Byron
120 S. Main Street P.O. Box 438
Port Byron, Illinois 61275

Permit is hereby granted to the above designated permittee(s) to construct and/or operate water pollution control facilities described as follows (quantities are approximate):

277 feet of 8 inch sanitary sewer and 3 manholes to serve 3 single family dwelling buildings (11 P.E., 1100 GPD, DAF) located at Hwy. IL 84 at James Street with discharge to an existing 8 inch sanitary sewer tributary to the above indicated sewage treatment plant.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s) additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

SPECIAL CONDITION 1: Any connections to this sanitary sewer extension must be in accordance with the latest Revisions of Title 35, Subtitle C, Chapter 1. Permits must be obtained if required by said regulations.

SPECIAL CONDITION 2: If this project is located within a wetlands, the U.S. Army Corps of Engineers may require a permit for construction pursuant to Section 404 of the Clean Water Act.

SPECIAL CONDITION 3: The Permittee to Construct shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activities associated with this project will result in the disturbance of one (1) or more acres total land area.

An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control - Permit Section.

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

ALD:CWB:n:\bow\permits\wpdocs\docs\permits\statecon\branson\2020-65088.docx

DIVISION OF WATER POLLUTION CONTROL

cc: EPA-Peoria FOS
MSA Professional Services
Records - Municipal

Amy L. Dragovich, P.E.
Manager, Permit Section



Route FAP 308
Section 15-00017-00-SW
County Rock Island

Marked Rte. IL-84
Project No. C-92-005-17
Contract No. 85697

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.

Jared Fluhr
Print Name
Project Engineer
Title
MSA Professional Services, Inc.
Agency

Professional Engineer seal for Jared Fluhr, State of Illinois, License No. 062.068915. Includes handwritten signature and date 4/28/2020.

I. Site Description:

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

The project will consist of a new 5' wide ADA compliant sidewalks and street crossings on the east side of IL-84 from Maintenance Garage (Lat: 41.602718 Long:-90.334924) to 11th St. (Lat: 41.619188 Long: -90.334790). Water main will be replaced from Lynn St. (Lat: 41.605621 Long: -90.335016) to Agnes Street (Lat: 41.614141 Long: -90.334791), with new water services bored under the highway.

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

Reconstruction of sidewalk and replacement a section of water main and storm sewer along the route as well.

C. Provide the estimated duration of this project:

September 1, 2020 to September 1, 2021

D. The total area of the construction site is estimated to be 4.4 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 4.4 acres.

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

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

- Sylvan silt loam, 10 -18% slope, K Factor = 0.37
Sylvan silt loam, 18 - 35% slope, K Factor = 0.43
Seaton silt loam, 2 - 5% slope, K Factor = 0.43
Raddle silt loam, 2 - 5% slope, K Factor = 0.37
Orthents, loamy, undulating, K Factor = 0.28
Hicory-Sylvan silt loams, 35 - 60% slope, K Factor = 0.37
Oakville-Tell complex, 10 -18% slope, K Factor = 0.02
Orion silt loam, 0 - 2% slope, K Factor = 0.49

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

There are no wetlands within the project site. See attached aerial map.

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

N/A

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):

Sidewalk removal and reconstruction - The existing sidewalk will need to be removed and then replaced with new ADA compliant sidewalks and intersections. This should not cause a great deal of soil disturbance as the sidewalk will not be very deep. Sidewalk replacement is from Quarry St. to 11th St.

Excavation to replace water main. Water main excavation is deep. Control sediment from stockpiled materials. Water main replacement is from Taylor Dr. to Agnes St.

Directional drilling will also be used to place the water main.

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:

Waters of the State

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

N/A

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

Graded ditches drain to an unnamed creek South of Quarry St. which is a direct tributary to the Mississippi River.

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

There are no areas within the right-of-way that will remain undisturbed. There are no areas that have special natural features that protection or "beyond normal" care.

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

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

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

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

Mississippi River, concrete washout and other suspended solids.

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

Sediment barriers will be placed along the periphery of the site to catch loose sediment.

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

An unnamed creek runs east to west, south of Quarry St. discharging to the Mississippi River.

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

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

- a. The name(s) of the listed water body:

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

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

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

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

II. Controls:

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

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

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

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

The following stabilization practices will be used for this project:

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

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

Stabilization will be of two types: temporary and permanent. Because the project will be staged, it is not likely that temporary stabilization will be used frequently. When used, it will be utilized in areas that are expected to not be worked for 14 days. Most likley the method of temporary stabilization will depend upon the time of year and project status. It is anticipated that temporary seeding will be the most comonly utilized method.

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

Permanant stabilization will include mulch or erosion control blanket, possibly riprap (see below) at the project discharge. Final seeding will also be utilized. It is not likely that sod will be utilized unless there are adjacent owners that will require immediate surface stabilization.

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

The following structural practices will be used for this project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Rock Outlet Protection |
| <input type="checkbox"/> Temporary Ditch Check | <input type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input checked="" type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input type="checkbox"/> Turf Reinforcement Mats | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (specify) |

- Aggregate Ditch
- Paved Ditch

- Other (specify)
- Other (specify)

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

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

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 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.

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

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

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:

Peak flow mitigation will not be utilized for this project. Therefore, detention or retention ponds will not be utilized. Currently, peak flowrates are not mitigated. However, by the nature that storm water is currently handled, that is, infiltration, evaporation, and shallow concentrated flow, the peak flows are less than if there was an existing storm sewer system. For storms with large return periods, the existing runoff is most likely not mitigated at all.

Permanent storm water management controls that will be utilized include hard armoring at the storm water discharge location(s).

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

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

N/A

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

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:

- Approximate duration of the project, including each stage of the project
- Rainy season, dry season, and winter shutdown dates
- Temporary stabilization measures to be employed by contract phases
- Mobilization timeframe
- Mass clearing and grubbing/roadside clearing dates
- Deployment of Erosion Control Practices
- Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
- Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
- Paving, saw-cutting, and any other pavement related operations
- Major planned stockpiling operations
- Timeframe for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
- Permanent stabilization activities for each area of the project

2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:

- Vehicle Entrances and Exits – Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
- Material Delivery, Storage and Use – Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
- Stockpile Management – Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
- Waste Disposal – Discuss methods of waste disposal that will be used for this project.
- Spill Prevention and Control – Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
- Concrete Residuals and Washout Wastes – Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management – Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment 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 to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

SWPPP Monitoring per ILR10. In addition, it is anticipated the project will have a resident engineer who will also be engaged in managing the project storm water discharge conformance to this SWPPP.

IV. Inspections:

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

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

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by 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

Additional Inspections Required:

N/A

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.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 * (217) 782-2829

217/782-0610

10/20/2020

VILLAGE OF PORT BYRON
BRUCE PETERSON
120 S MAIN ST, PO BOX 438
PORT BYRON, IL 61275

RE: FACILITY : HIGHWAY 84 SIDEWALK RECONSTRUCTION & WATER MAIN, PORT BYRON, IL
COUNTY : ROCK ISLAND, NPDES Permit No : ILR10BM45
Notice of Coverage Under Construction Site Activity Storm Water General Permit

Dear NPDES Permittee:

We have reviewed your application and determined that storm water discharges associated with industrial activity from construction sites are appropriately covered by the attached General NPDES Permit issued by the Agency. Your discharge is covered by this permit effective as of the date of this letter or as identified by the conditions of the permit. The Permit as issued covers application requirements, a storm water pollution prevention plan and reporting requirements.

As a Permit Holder, it is your responsibility to:

1. Submit a modified Notice of Intent of any **ownership or address change** to the Permit Section within 30 days;
2. **A Notice of Termination** must be sent to the Agency, at the address indicated on the Notice of Termination, once your construction project has been **completed and the site is properly stabilized**. A Notice of Termination form has been enclosed for your convenience;

This letter shows your facility permit number below the construction site name. Please save this number and reference it in all future correspondence. Should you have any questions concerning the Permit, please contact Melissa Parrott at (217) 782-0610.

Very truly yours,

Amy L. Dragovich, P.E.
Manager, Permit Section
Division of Water Pollution Control

CC : Records Unit, MSA, Region : Peoria

4302 N. Main St., Rockford, IL 61103 (815) 987-7760
593 S. State, Elgin, IL 60120 (847) 608-3131
2125 S. First St., Champaign, IL 61820 (217) 278-5800
2009 Main St., Collinsville, IL 62234 (618) 346-5120

9311 Harrison St., Dec. Plains, IL 60016 (847) 294-4000
5407 N. University St., Arber 113, Peoria, IL 61614 (309) 693-3462
2309 W. Main St., Suite 116, Marion, IL 62959 (618) 993-7200
100 W. Randolph, Suite 11-200, Chicago, IL 60601 (312) 814-6026

PLEASE PRINT ON RECYCLED PAPER

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

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

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets
SPECIAL PROVISION
FOR
CONSTRUCTION AND MAINTENANCE SIGNS

Effective: January 1, 2004
Revised: June 1, 2007

All references to Sections or Articles in this specification shall be construed to mean a specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

701.14. Signs. Add the following paragraph to Article 701.14:

All warning signs shall have minimum dimensions of 1200 mm x 1200 mm (48" x 48") and have a black legend on a fluorescent orange reflectorized background, meeting, as a minimum, Type AP reflectivity requirements of Table 1091-2 in Article 1091.02.

State of Illinois
DEPARTMENT OF TRANSPORTATION
Bureau of Local Roads & Streets

SPECIAL PROVISION
FOR
GROWTH CURVE

Effective: March 1, 2008
Revised: January 1, 2010

All references to Sections and Articles in this Special Provision shall be construed to mean specific Sections and Articles in the Standard Specifications for Road and Bridge Construction adopted by the Department of Transportation.

The Contractor shall perform a growth curve at the beginning of placement of each type of mix and each lift. The growth curve for each type of mix and each lift shall be performed within the first 200 tons (180 metric tons). If an adjustment is made to the specific mix design, the Engineer reserves the right to request an additional growth curve and supporting tests at the Contractor's expense.

Compaction of the growth curve shall commence immediately after the course is placed and at a temperature of not less than 280 °F (140 °C). The growth curve, consisting of a plot of lb/cu ft (kg/cu m) vs. number of passes with the project breakdown roller, shall be developed. Roller speed during the growth curve testing shall be the same as the normal paving operation. This curve shall be established by use of a nuclear gauge. Tests shall be taken after each pass until the highest lb/cu ft (kg/cu m) is obtained. This value shall be the target density provided the HMA Gyratory air voids are within acceptable limits. If the HMA Gyratory air voids are not within the specified limits, corrective action shall be taken, and a new target density shall be established.

A new growth curve is required if the breakdown roller used on the growth curve is replaced with a new roller during production. The target density shall apply only to the specific gauge used. If additional gauges are to be used to determine density specification compliance, the Contractor shall establish a unique minimum allowable target density from the growth curve location for each gauge.

At least one core sample per day shall be taken at a location specified by the Engineer. Core densities will be determined using the Illinois-Modified AASHTO T 166 or T 275 procedure by the Department. The core density shall be according to Articles 1030.05(d)(4) and (d)(7). The QA Manager is responsible for assuring and documenting that the determined number of roller passes has been accomplished. The Engineer reserves the right to take core samples at any time to verify density from the nuclear gauge,

All lifts and confined longitudinal joint edges shall be compacted to an average nuclear gauge density of not less than 95 percent nor greater than 102 percent of the target density obtained on the growth curve. Unconfined longitudinal joint edges shall be compacted to an average nuclear gauge density of not less than 93 percent nor greater than 102 percent of the target density obtained on the growth curve. The average nuclear gauge density shall be based on tests representing one day's production.

Quality Control density tests shall be performed at randomly selected locations within 1/2 mile (800 m) intervals per lift per lane. In no case shall more than one half day's production be completed without density testing being performed. Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 2 in. (50 mm) from each pavement edge.

If the Contractor is not controlling the compaction process and is making no effort to take corrective action, the operation shall stop as directed by the Engineer.

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 2.

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.

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012

Revised: April 1, 2016

Add the following Section to the Standard Specifications:

“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

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

303.02 Materials. Materials shall be according to the following.

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

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01, CS 02, and RR 01 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01, CS 02, or RR 01 are used in lower lifts.

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

303.03 Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

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

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradations CA 02, CA 06, or CA 10 shall be 12 in. (300 mm). The maximum nominal lift thickness of aggregate gradations CS 01, CS 02, and RR 01 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When the contract specifies that a granular subbase is to be placed on the aggregate subgrade improvement, the 3 in. (75 mm) of capping aggregate shall be the same gradation and may be placed with the underlying aggregate subgrade improvement material.

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

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

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

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

Add the following to Section 1004 of the Standard Specifications:

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

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. In applications where greater than 24 in. (600 mm) of subgrade material is required, gravel may be used below the first 12 in (300 mm) of subgrade.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.
 - (1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 01.

The coarse aggregate gradation for total subgrade thickness more than 12 in. (300 mm) shall be CS 01 or CS 02 as shown below or RR 01 according to Article 1005.01(c).

COARSE AGGREGATE SUBGRADE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)					
---	--	--	--	--	--

Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

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

80274

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

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

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

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

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

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

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

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

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

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

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

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

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

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

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

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

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

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

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

Add the following to Section 109 of the Standard Specifications.

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

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

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

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

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

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

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

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

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

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

80384

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)

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 2.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

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

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

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

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

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

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

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

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

- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
 - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
 - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines the

bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification will also include a statement of reasons for the adverse determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period to cure the deficiency.

- (c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "DOT.DBE.UP@illinois.gov" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

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

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

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

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

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

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

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

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

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

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

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

made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

- (h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

80029

DISPOSAL FEES (BDE)

Effective: November 1, 2018

Replace Articles 109.04(b)(5) – 109.04(b)(8) of the Standard Specifications with the following:

- “(5) Disposal Fees. When the extra work performed includes paying for disposal fees at a clean construction and demolition debris facility, an uncontaminated soil fill operation or a landfill, the Contractor shall receive, as administrative costs, an amount equal to five percent of the first \$10,000 and one percent of any amount over \$10,000 of the total approved costs of such fees.
- (6) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- (7) Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with itemized statements of the cost of such force account work. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor’s stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Itemized statements at the cost of force account work shall be detailed as follows.

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman. Payrolls shall be submitted to substantiate actual wages paid if so requested by the Engineer.
 - b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 - c. Quantities of materials, prices and extensions.
 - d. Transportation of materials.
 - e. Cost of property damage, liability and workmen’s compensation insurance premiums, unemployment insurance contributions, and social security tax.
- (8) Work Performed by an Approved Subcontractor. When extra work is performed by an approved subcontractor, the Contractor shall receive, as administrative costs, an amount equal to five percent of the total approved costs of such work with the minimum payment being \$100.

- (9) All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after receipt of the Central Bureau of Construction form "Extra Work Daily Report". If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Department is released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery."

80402

EMULSIFIED ASPHALTS (BDE)

Effective: August 1, 2019

Revise Article 1032.06 of the Standard Specifications to read:

“1032.06 Emulsified Asphalts. Emulsified asphalts will be accepted according to the current Bureau of Materials Policy Memorandum, “Emulsified Asphalt Acceptance Procedure”. These materials shall be homogeneous and shall show no separation of asphalt after thorough mixing, within 30 days after delivery, provided separation has not been caused by freezing. They shall coat the aggregate being used in the work to the satisfaction of the Engineer and shall be according to the following requirements.

- (a) Anionic Emulsified Asphalt. Anionic emulsified asphalts RS-1, RS-2, HFRS-2, SS-1h, and SS-1 shall be according to AASHTO M 140, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (b) Cationic Emulsified Asphalt. Cationic emulsified asphalts CRS-1, CRS-2, CSS-1h, and CSS-1 shall be according to AASHTO M 208, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (c) High Float Emulsion. High float emulsions HFE-90, HFE-150, and HFE-300 are medium setting and shall be according to the following table.

Test	HFE-90	HFE-150	HFE-300
Viscosity, Saybolt Furol, at 122 °F (50 °C), (AASHTO T 59), SFS ^{1/}	50 min.	50 min.	50 min.
Sieve Test, No. 20 (850 µm), retained on sieve, (AASHTO T 59), %	0.10 max.	0.10 max.	0.10 max.
Storage Stability Test, 1 day, (AASHTO T 59), %	1 max.	1 max.	1 max.
Coating Test (All Grades), (AASHTO T 59), 3 minutes	stone coated thoroughly		
Distillation Test, (AASHTO T 59): Residue from distillation test to 500 °F (260 °C), % Oil distillate by volume, %	65 min. 7 max.	65 min. 7 max.	65 min. 7 max.

Characteristics of residue from distillation test to 500 °F (260 °C): Penetration at 77 °F (25 °C), (AASHTO T 49), 100 g, 5 sec, dmm	90-150	150-300	300 min.
Float Test at 140 °F (60 °C), (AASHTO T 50), sec.	1200 min.	1200 min.	1200 min.

1/ The emulsion shall be pumpable.

- (d) Penetrating Emulsified Prime. Penetrating Emulsified Prime (PEP) shall be according to AASHTO T 59, except as follows.

Test	Result
Viscosity, Saybolt Furol, at 77 °F (25 °C), SFS	75 max.
Sieve test, retained on No. 20 (850 µm) sieve, %	0.10 max.
Distillation to 500 °F (260 °C) residue, %	38 min.
Oil distillate by volume, %	4 max.

The PEP shall be tested according to the current Bureau of Materials Illinois Laboratory Test Procedure (ILTP), "Sand Penetration Test of Penetrating Emulsified Prime (PEP)". The time of penetration shall be equal to or less than that of MC-30. The depth of penetration shall be equal to or greater than that of MC-30.

- (e) Delete this subparagraph.
- (f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts, e.g. SS-1hP, CSS-1hP, CRS-2P (formerly CRSP), CQS-1hP (formerly CSS-1h Latex Modified) and HFRS-2P (formerly HFP) shall be according to AASHTO M 316, except as follows.
- (1) The cement mixing test will be waived when the polymer modified emulsion is being used as a tack coat.
 - (2) CQS-1hP (formerly CSS-1h Latex Modified) emulsion for micro-surfacing treatments shall use latex as the modifier.
 - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show minimal to no white, milky colored substance and shall be a homogenous brown color throughout.
 - (4) The distillation for all polymer modified emulsions shall be performed according to AASHTO T 59, except the temperature shall be 374 ± 9 °F (190 ± 5 °C) to be held for a period of 15 minutes and measured using an ASTM 16F (16C) thermometer.
 - (5) The specified temperature for the Elastic Recovery test for all polymer modified emulsions shall be 50.0 ± 1.0 °F (10.0 ± 0.5 °C).

(6) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.

(g) Non-Tracking Emulsified Asphalt. Non-tracking emulsified asphalt NTEA (formerly SS-1vh) shall be according to the following.

Test	Requirement
Saybolt Viscosity at 77 °F (25 °C), (AASHTO T 59), SFS	20-100
Storage Stability Test, 24 hr, (AASHTO T 59), %	1 max.
Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	50 min.
Sieve Test, No. 20 (850 µm), (AASHTO T 59), %	0.3 max.
Tests on Residue from Evaporation	
Penetration at 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 49), dmm	40 max.
Softening Point, (AASHTO T 53), °F (°C)	135 (57) min.
Ash Content, (AASHTO T 111), % ^{1/}	1 max.

1/ The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent

The different grades are, in general, used for the following.

Grade	Use
SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, NTEA (formerly SS-1vh)	Tack Coat
PEP	Prime Coat
RS-2, HFE-90, HFE-150, HFE-300, CRS-2P (formerly CRSP), HFRS-2P (formerly HFP), CRS-2, HFRS-2	Bituminous Surface Treatment
CQS-1hP (formerly CSS-1h Latex Modified)	Micro-Surfacing Slurry Sealing Cape Seal"

80415

GEOTECHNICAL FABRIC FOR PIPE UNDERDRAINS AND FRENCH DRAINS (BDE)

Effective: November 1, 2019

Revise Article 1080.01(a) of the Standard Specifications to read:

“(a) Fabric Materials. Fabric materials shall be as follows.

- (1) Knitted Fabric. Knitted fabric envelope shall be Type A according to ASTM D 6707 and be a continuous one piece knitted polymeric material that fits over the pipe underdrain like a sleeve. It shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.
- (2) Woven or Nonwoven Fabric. The fabric shall be Class 3 according to AASHTO M 288 and consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape like character) shall not be permitted. The yarns or filaments shall be dimensionally stable (i.e. maintain their relative position with respect to each other) and resistant to delamination. The yarns or filaments shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.
- (3) Physical Properties. The physical properties for knitted, woven, and nonwoven fabrics shall be according to the following.

PHYSICAL PROPERTIES			
	Knitted ^{1/}	Woven ^{2/}	Nonwoven ^{2/}
Grab Strength, lb (N) ASTM D 4632 ^{3/}	--	180 (800) min.	112 (500) min.
Elongation/Grab Strain, % ASTM D 4632 ^{3/}	--	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{3/}	--	67 (300) min.	40 (180) min.
Puncture Strength, lb (N) ASTM D 6241 ^{3/}	180 (800) min.	370 (1650) min.	222 (990) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{4/}	30 (0.60) max.	40 (0.425) max.	40 (0.425) max.
Permittivity, sec ⁻¹ ASTM D 4491	1.0 min.		
Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355	--	50 min.	50 min.

1/ Manufacturer's certification to meet test requirements.

2/ NTPEP results or manufacturer's certification to meet test requirements.

3/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

4/ Values represent the maximum average roll value.”

Revise Article 1080.05 of the Standard Specifications to read:

“1080.05 Geotechnical Fabric for French Drains and Pipe Underdrains, Type 2. Geotechnical fabric for french drains and pipe underdrains, Type 2 shall be Class 3 according to AASHTO M 288 and consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. The yarns or filaments shall be dimensionally stable (i.e. maintain their relative position with respect to each other) and resistant to delamination. The yarns or filaments shall be free from any chemical treatment or coating that might significantly reduce porosity and permittivity.

The fabric shall be according to the following.

PHYSICAL PROPERTIES ^{1/}		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{2/}	180 (800) min.	112 (500) min.
Elongation/Grab Strain, % ASTM D 4632 ^{2/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/}	67 (300) min.	40 (180) min.
Puncture Strength, lb (N) ASTM D 6241 ^{2/}	370 (1650) min.	222 (990) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{3/}	60 (0.25) max.	
Permittivity, sec ⁻¹ ASTM D 4491	0.2 min.	
Ultraviolet Stability % retained strength after 500 hours of exposure - ASTM D 4355	50 min.	

1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.

2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

3/ Values represent the maximum average roll value.”

HOT-MIX ASPHALT – BINDER AND SURFACE COURSE (BDE)

Effective: July 2, 2019
 Revised: November 1, 2019

Description. This work shall consist of constructing a hot-mix asphalt (HMA) binder and/or surface course on a prepared base. Work shall be according to Sections 406 and 1030 of the Standard Specifications, except as modified herein.

Materials. Add the following after the second paragraph of Article 1003.03(c):

“For mixture IL-9.5FG, at least 67 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, steel slag sand, or combinations thereof meeting FA 20 gradation.”

Revise Article 1004.03(c) to read:

“(c) Gradation. The coarse aggregate gradations shall be as listed in the following table.

Use	Size/Application	Gradation No.
Class A-1, A-2, & A-3	3/8 in. (10 mm) Seal	CA 16 or CA 20
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & A-3	Cover Coat	CA 14
HMA High ESAL	IL-19.0	CA 11 ^{1/}
	SMA 12.5 ^{2/}	CA 13, CA 14, or CA 16
	SMA 9.5 ^{2/}	CA 13 or CA 16 ^{3/}
	IL-9.5	CA 16
	IL-9.5FG	CA 16
HMA Low ESAL	IL-19.0L	CA 11 ^{1/}
	IL-9.5L	CA 16

1/ CA 16 or CA 13 may be blended with the CA 11.

2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.

3/ The specified coarse aggregate gradations may be blended.”

HMA Nomenclature. Revise the “High ESAL” portion of the table in Article 1030.01 to read:

“High ESAL	Binder Courses	IL-19.0, IL-9.5, IL-9.5FG, IL-4.75, SMA 12.5, SMA 9.5
------------	----------------	---

	Surface Courses	IL-9.5, IL-9.5FG, SMA 12.5, SMA 9.5”
--	-----------------	---

Mixture Design. Revise the table in Article 1030.04(a)(1) and add SMA 9.5 and IL-9.5FG mixture compositions as follows:

“HIGH ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/}						
Sieve Size	SMA 12.5 ^{5/}		SMA 9.5 ^{5/}		IL-9.5FG	
	min.	max.	min.	max.	min.	max.
1 in. (25 mm)						
3/4 in. (19 mm)		100		100		
1/2 in. (12.5 mm)	90	99	95	100		100
3/8 in. (9.5 mm)	50	85	70	95	90	100
#4 4.75 mm)	20	40	30	50	60	75
#8 (2.36 mm)	16	24 ^{4/}	20	30	45	60
#16 (1.18 mm)				21	25	40
#30 (600 μm)				18	15	30
#50 (300 μm)				15	8	15
#100 (150 μm)					6	10
#200 (75 μm)	8.0	11.0 ^{3/}	8.0	11.0 ^{3/}	4.0	6.5
#635 (20 μm)		≤ 3.0		≤ 3.0		
Ratio of Dust/Asphalt Binder						1.0

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.

- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.
- 4/ When establishing the adjusted job mix formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above 24 percent.
- 5/ When the bulk specific gravity (Gsb) of the component aggregates vary by more than 0.2, the blend gradations shall be based on volumetric percentage.”

Revise the table in Article 1030.04(b)(1) to read:

“VOLUMETRIC REQUIREMENTS, High ESAL				
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %
	IL-19.0	IL-9.5 IL-9.5FG	IL-4.75 ^{1/}	
50	13.5	15.0	18.5	65 - 78 ^{2/}
70			65 – 75 ^{3/}	
90				

- 1/ Maximum draindown for IL-4.75 shall be 0.3 percent.
- 2/ VFA for IL-4.75 shall be 76-83 percent.
- 3/ VFA for IL-9.5FG shall be 65-78 percent.”

Revise the table in Article 1030.04(b)(3) to read:

“VOLUMETRIC REQUIREMENTS, SMA 12.5 ^{1/} and SMA 9.5 ^{1/}				
ESALs (million)	Ndesign	Design Air Voids Target, %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
≤ 10	50	4.0	16.0	75 – 80
> 10	80	4.0	17.0	75 – 80

- 1/ Maximum draindown shall be 0.3 percent.”

Quality Control/Quality Assurance (QC/QA). Revise the third paragraph of Article 1030.05(d)(3) to read:

“If the Contractor and Engineer agree the nuclear density test method is not appropriate for the mixture, cores shall be taken at random locations determined according to the

QC/QA document "Determination of Random Density Test Site Locations". Core densities shall be determined using the Illinois Modified AASHTO T 166 or T 275 procedure."

Add the following paragraphs to the end of Article 1030.05(d)(3):

"Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement). Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location.

When a longitudinal joint sealant (LJS) is applied, longitudinal joint density testing will not be required on the joint(s) sealed."

Revise the second table in Article 1030.05(d)(4) and its notes to read:

"DENSITY CONTROL LIMITS			
Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density, minimum
IL-4.75	Ndesign = 50	93.0 – 97.4 % ^{1/}	91.0%
IL-9.5FG	Ndesign = 50 - 90	93.0 – 97.4 %	91.0%
IL-9.5	Ndesign = 90	92.0 – 96.0 %	90.0%
IL-9.5, IL-9.5L,	Ndesign < 90	92.5 – 97.4 %	90.0%
IL-19.0	Ndesign = 90	93.0 – 96.0 %	90.0%
IL-19.0, IL-19.0L	Ndesign < 90	93.0 ^{2/} – 97.4 %	90.0%
SMA	Ndesign = 50 or 80	93.5 – 97.4 %	91.0%

1/ Density shall be determined by cores or by correlated, approved thin lift nuclear gauge.

2/ 92.0 % when placed as first lift on an unimproved subgrade.”

Equipment. Add the following to Article 1101.01 of the Standard Specifications:

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

- (1) The minimum diameter of the drum(s) shall be 42 in. (1070 mm);
- (2) The minimum length of the drum(s) shall be 57 in. (1480 mm);
- (3) The minimum unit static force on the drum(s) shall be 125 lb/in. (22 N/m); and
- (4) The minimum force on the oscillatory drum shall be 18,000 lb (80 kN).”

CONSTRUCTION REQUIREMENTS

Add the following to Article 406.03 of the Standard Specifications:

“(j) Oscillatory Roller 1101.01”

Revise the third paragraph of Article 406.05(a) to read:

“All depressions of 1 in. (25 mm) or more in the surface of the existing pavement shall be filled with binder. At locations where heavy disintegration and deep spalling exists, the area shall be cleaned of all loose and unsound material, tacked, and filled with binder (hand method).”

Revise Article 406.05(c) to read.

“(c) Binder (Hand Method). Binder placed other than with a finishing machine will be designated as binder (hand method) and shall be compacted with a roller to the satisfaction of the Engineer. Hand tamping will be permitted when approved by the Engineer.”

Revise the special conditions for mixture IL-4.75 in Article 406.06(b)(2)e. to read:

“e. The mixture shall be overlaid within 5 days of being placed.”

Revise Article 406.06(d) to read:

“(d) Lift Thickness. The minimum compacted lift thickness for HMA binder and surface courses shall be as follows.

MINIMUM COMPACTED LIFT THICKNESS	
Mixture Composition	Thickness, in. (mm)
IL-4.75	3/4 (19) - over HMA surfaces ^{1/} 1 (25) - over PCC surfaces ^{1/}
IL-9.5FG	1 1/4 (32)
IL-9.5, IL-9.5L	1 1/2 (38)
SMA 9.5	1 1/2 (38)
SMA 12.5	2 (51)
IL-19.0, IL-19.0L	2 1/4 (57)

1/ The maximum compacted lift thickness for mixture IL-4.75 shall be 1 1/4 in. (32 mm).”

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

“TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA				
	Breakdown Roller (one of the following)	Intermediate Roller	Final Roller (one or more of the following)	Density Requirement
Binder and Surface ^{1/}	V _D , P ^{3/} , T _B , 3W, O _T , O _B	P ^{3/} , O _T , O _B	V _S , T _B , T _F , O _T	As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7).
IL-4.75 and SMA ^{4/ 5/}	T _B , 3W, O _T	--	T _F , 3W, O _T	
Bridge Decks ^{2/}	T _B	--	T _F	As specified in Articles 582.05 and 582.06.

3/ A vibratory roller (V_D) or oscillatory roller (O_T or O_B) may be used in lieu of the pneumatic-tired roller on mixtures containing polymer modified asphalt binder.”

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

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

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

Basis of Payment. Replace the second through the fifth paragraphs of Article 406.14 with the following:

“HMA binder and surface courses will be paid for at the contract unit price per ton (metric ton) for MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS; HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the Ndesign specified; HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and Ndesign specified; HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition, friction aggregate, and Ndesign specified.”

80416

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

Effective: January 1, 2018

Revised: March 1, 2019

Description. In addition to those manufactured according to the current standards included in this contract, manholes, valve vaults, and flat slab tops manufactured prior to March 1, 2019, according to the previous Highway Standards listed below will be accepted on this contract:

Product	Previous Standards		
Precast Manhole Type A, 4' (1.22 m) Diameter	602401-05	602401-04	602401-03
Precast Manhole Type A, 5' (1.52 m) Diameter	602402-01	602402	602401-03
Precast Manhole Type A, 6' (1.83 m) Diameter	602406-09	602406-08	602406-07
Precast Manhole Type A, 7' (2.13 m) Diameter	602411-07	602411-06	602411-05
Precast Manhole Type A, 8' (2.44 m) Diameter	602416-07	602416-06	602416-05
Precast Manhole Type A, 9' (2.74 m) Diameter	602421-07	602421-06	602421-05
Precast Manhole Type A, 10' (3.05 m) Diameter	602426-01	602426	
Precast Valve Vault Type A, 4' (1.22 m) Diameter	602501-04	602501-03	602501-02
Precast Valve Vault Type A, 5' (1.52 m) Diameter	602506-01	602506	602501-02
Precast Reinforced Concrete Flat Slab Top	602601-05	602601-04	

The following revisions to the Standard Specifications shall apply to manholes, valve vaults, and flat slab tops manufactured according to the current standards included in this contract:

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

“(g) Structural Steel (Note 4) 1006.04

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

Add the following to Article 602.02 of the Standard Specifications:

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

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

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

“Catch basin Types A, B, C, and D; Manhole Type A; Inlet Types A and B; Drainage Structures Types 1, 2, 3, 4, 5, and 6; Valve Vault Type A; and reinforced concrete flat slab top (Highway Standard 602601) shall be manufactured according to AASHTO M 199 (M 199M), except the minimum wall thickness shall be as shown on the plans. Additionally, catch basins, inlets, and drainage structures shall have a minimum concrete compressive strength of 4500 psi

(31,000 kPa) at 28 days and manholes, valve vaults, and reinforced concrete flat slab tops shall have a minimum concrete compressive strength of 5000 psi (34,500 kPa) at 28 days.”

80393

MOBILIZATION (BDE)

Effective: April 1, 2020

Replace Articles 671.02(a), (b), and (c) of the Standard Specifications with the following:

“(a) Upon execution of the contract, 90 percent of the pay item will be paid.

(b) When 90 percent of the adjusted contract value is earned, the remaining ten percent of the pay item will be paid along with any amount bid in excess of six percent of the original contract amount.”

80428

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.”

80430

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revised: January 2, 2021

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material produced by cold milling or crushing an existing hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
- (b) Reclaimed Asphalt Shingles (RAS). RAS is the material produced from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material by weight of RAS, as defined in the Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”. RAS shall come from a facility source on the Department’s “Qualified Producer List of Certified Sources for Reclaimed Asphalt Shingles” where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 93 percent passing the #4 (4.75 mm) sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
 - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
 - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

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

- (a) RAP Stockpiles. The Contractor shall construct individual RAP stockpiles meeting one of the following definitions. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. “Homogeneous Surface”).

Prior to milling, the Contractor shall request the Department provide documentation on the quality of the RAP to clarify the appropriate stockpile.

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the No. 4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mixture composition of the mix design.
- (2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogeneous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. Conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag.
- (4) Conglomerate "D" Quality (Conglomerate DQ). Conglomerate DQ RAP stockpiles shall be according to Articles 1031.02(a)(1)-1031.02(a)(3), except they may also consist of RAP from HMA shoulders, bituminous stabilized subbases, or HMA (High or Low ESAL) binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, non-bituminous surface treatment (i.e. high friction surface treatments), pavement fabric, joint sealants, plant cleanout, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise specified by the Engineer, mechanically blending manufactured sand (FM 20 or FM 22) or fine FRAP up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be B quality or better from an

approved Aggregate Gradation Control System source. The sand shall be accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type, and lot number shall be maintained by project contract number and kept for a minimum of three years.

Additional processed RAP/FRAP/RAS shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the original stockpile after the test results for the working pile are found to meet the requirements specified in Articles 1031.03 and 1031.04.

1031.03 Testing. RAP/FRAP and RAS testing shall be according to the following.

(a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2,000 tons (1,800 metric tons) and one sample per 2,000 tons (1,800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4,000 tons (3,600 metric tons).

(2) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the Department proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Each sample shall be split to obtain two equal samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall perform a washed extraction on the other test sample according to Illinois Modified AASHTO T 164. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to the Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Source".

Samples shall be collected during stockpiling at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1,000 tons (900 metric tons) and one sample per 500 tons (450 metric tons) or a minimum of once per week, whichever is more frequent, thereafter. A minimum of five samples are required for stockpiles less than 1,000 tons (900 metric tons).

Before testing, each sample shall be split to obtain two test samples. One of the two test samples from the final split shall be labeled and stored for Department use. The

Contractor shall perform a washed extraction and test for unacceptable materials on the other test sample according to Illinois Modified AASHTO T 164. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

The Contractor shall obtain and make available all of the test results from the start of the original stockpile.

1031.04 Evaluation of Tests. Evaluation of test results shall be according to the following.

- (a) Limits of Precision. The limits of precision between the Contractor's and the Department's split sample test results shall be according to the following.

Test Parameter	Limits of Precision		
	RAP	FRAP	RAS
% Passing			
1/2 in. (12.5 mm)	6.0 %	5.0 %	
# 4 (4.75 mm)	6.0 %	5.0 %	
# 8 (2.36 mm)	4.0 %	3.0 %	4.0 %
# 30 (600 μm)	3.0 %	2.0 %	4.0 %
# 200 (75 μm)	2.5 %	2.2 %	4.0 %
Asphalt Binder	0.4 %	0.3 %	3.0 %
G _{mm}	0.035	0.030	

If the test results are outside the above limits of precision, the Department will immediately investigate.

- (b) Evaluation of RAP/FRAP Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation, and when applicable G_{mm}. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous/ Conglomerate
1 in. (25 mm)	
1/2 in. (12.5 mm)	± 8 %
# 4 (4.75 mm)	± 6 %
# 8 (2.36 mm)	± 5 %
# 16 (1.18 mm)	
# 30 (600 μm)	± 5 %
# 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.4 % ^{1/}
G _{mm}	± 0.03 ^{2/}

1/ The tolerance for FRAP shall be ± 0.3 percent.

- 2/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Aggregate Bulk (Dry) Specific Gravity (Gsb) of Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)".

If more than 20 percent of the test results for an individual parameter (individual sieves, G_{mm} , and/or asphalt binder content) are out of the above tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the Department for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for solvent extractions according to the document "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (c) Evaluation of RAS and RAS Blended with Manufactured Sand or Fine FRAP Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
# 8 (2.36 mm)	± 5 %
# 16 (1.18 mm)	± 5 %
# 30 (600 μm)	± 4 %
# 200 (75 μm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If more than 20 percent of the test results for an individual parameter (individual sieves and/or asphalt binder content) are out of the above tolerances, or if the unacceptable material exceeds 0.5 percent by weight of material retained on the No. 4 (4.75 mm) sieve, the RAS or RAS blend shall not be used in Department projects. All test data and acceptance ranges shall be sent to the Department for evaluation.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

- (a) RAP. The aggregate quality of the RAP for homogeneous, conglomerate, and conglomerate DQ stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
 - (2) RAP from Class I binder, HMA (High ESAL) binder, or (Low ESAL) IL-19.0L binder mixtures are designated as containing Class C quality coarse aggregate.

(3) RAP from BAM stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Coarse and fine FRAP stockpiles containing plus No. 4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate sample to the District Office. Consultant laboratory services will be at no additional cost to the Department. The District will forward the sample to the Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

1031.06 Use of RAP/FRAP and/or RAS in HMA. The use of RAP/FRAP and/or RAS shall be the Contractor's option when constructing HMA in all contracts.

(a) RAP/FRAP. The use of RAP/FRAP in HMA shall be as follows.

(1) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.

(2) Steel Slag Stockpiles. Homogeneous RAP stockpiles containing steel slag will be approved for use in all HMA (High ESAL and Low ESAL) surface and binder mixture applications.

(3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. FRAP from conglomerate stockpiles shall be considered equivalent to limestone for frictional considerations. Known frictional contributions from plus No. 4 (4.75 mm) homogeneous FRAP stockpiles will be accounted for in meeting frictional requirements in the specified mixture.

(4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.

(5) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, or conglomerate.

- (6) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in Article 1031.06(c)(1) below for a given Ndesign.
- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.
- (c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.
- (1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement (ABR) shall not exceed the amounts listed in the following table.

HMA Mixtures - RAP/RAS Maximum ABR % ^{1/2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

- (2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % ^{1/2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	--	--	25

IL-4.75	--	--	35
---------	----	----	----

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).

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

- (a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for verification. If additional RAP/FRAP and/or RAS stockpiles are tested and found that no more than 20 percent of the individual parameter test results, as defined in Article 1031.04, are outside of the control tolerances set for the original RAP/FRAP and/or RAS stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP and/or RAS stockpiles may be used in the original mix design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design.

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

1031.08 HMA Production. HMA production utilizing RAP/FRAP and/or RAS shall be as follows.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP/FRAP and/or RAS feed system to remove or reduce oversized material.

If the RAP/FRAP and/or RAS control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and/or RAS and either switch to the virgin aggregate design or submit a new mix design.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.
- (b) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within

± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

(c) RAP/FRAP and/or RAS. HMA plants utilizing RAP/FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAP/FRAP/RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate and RAP/FRAP/RAS moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP/RAS are recorded in a wet condition.)
- i. A positive dust control system shall be utilized when the combined contribution of reclaimed material passing the No. 200 sieve exceeds 1.5 percent.

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- e. RAP/FRAP/RAS weight to the nearest pound (kilogram).

- f. Virgin asphalt binder weight to the nearest pound (kilogram).
- g. Residual asphalt binder in the RAP/FRAP/RAS material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.09 RAP in Aggregate Applications. RAP in aggregate applications shall be according to the Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications" and the following.

- (a) RAP in Aggregate Surface Course and Aggregate Wedge Shoulders, Type B. The use of RAP in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders, Type B shall be as follows.
 - (1) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
 - (2) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted.
- (b) RAP in Aggregate Subgrade Improvement (ASI). RAP in ASI shall be according to Article 1031.06, except "Conglomerate DQ" and "Non-Quality" may be used."

80306

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2019

Revised: January 1, 2020

Revise Section 669 of the Standard Specifications to read:

“SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

669.01 Description. This work shall consist of the transportation and proper disposal of regulated substances. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their contents and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.

669.02 Equipment. The Contractor shall notify the Engineer of the delivery of all excavation, storage, and transportation equipment to a work area location. The equipment shall comply with OSHA and American Petroleum Institute (API) guidelines and shall be furnished in a clean condition. Clean condition means the equipment does not contain any residual material classified as a non-special waste, non-hazardous special waste, or hazardous waste. Residual materials include, but are not limited to, petroleum products, chemical products, sludges, or any other material present in or on equipment.

Before beginning any associated soil or groundwater management activity, the Contractor shall provide the Engineer with the opportunity to visually inspect and approve the equipment. If the equipment contains any contaminated residual material, decontamination shall be performed on the equipment as appropriate to the regulated substance and degree of contamination present according to OSHA and API guidelines. All cleaning fluids used shall be treated as the contaminant unless laboratory testing proves otherwise.

669.03 Pre-Construction Submittals and Qualifications. Prior to beginning this work, or working in areas with regulated substances, the Contractor shall submit a “Regulated Substances Pre-Construction Plan (RSPCP)” to the Engineer for review and approval using form BDE 2730. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

As part of the RSPCP, the Contractor(s) or firm(s) performing the work shall meet the following qualifications.

- (a) Regulated Substances Monitoring. Qualification for environmental observation and field screening of regulated substances work and environmental observation of UST removal shall require either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements using BDE 2730.

Qualification for each individual performing regulated substances monitoring shall require a minimum of one-year of experience in similar activities as those required for the project.

- (b) Underground Storage Tank Removal. Qualification for underground storage tank (UST) removal work shall require licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

The Engineer will require up to 21 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 21 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field and documented using BDE 2730A "Regulated Substances Pre-Construction Plan (RSPCP) Addendum" and submitted to the Engineer for approval.

CONSTRUCTION REQUIREMENTS

669.04 Regulated Substances Monitoring. Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities at the contract specific work areas. As part of the regulated substances monitoring, the monitoring personnel shall perform and document the applicable duties listed on form BDE 2732 "Regulated Substances Monitoring Daily Record (RSMDR)".

- (a) Environmental Observation. Prior to beginning excavation, the Contractor shall mark the limits of the contract specific work areas. Once work begins, the monitoring personnel shall be present on-site continuously during the excavation and loading of material.
- (b) Field Screening. Field screening shall be performed during the excavation and loading of material from the contract specific work areas, except for material classified according to Article 669.05(b)(1) or 669.05(c) where field screening is not required.

Field screening shall be performed with either a photoionization detector (PID) (minimum 10.6eV lamp) or a flame ionization detector (FID), and other equipment as appropriate, to monitor for potential contaminants associated with regulated substances. The PID or FID shall be calibrated on-site, and background level readings taken and recorded daily, and as field and weather conditions change. Field screen readings on the PID or FID in excess of background levels indicates the potential presence of regulated substances requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

669.05 Regulated Substances Management and Disposal. The management and disposal of soil and/or groundwater containing regulated substances shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605, the soil shall be managed as follows:
 - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC, but still considered within area background levels by the Engineer, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable. If the soils cannot be utilized within the right-of-way, they shall be managed and disposed of at a landfill as a non-special waste.
 - (2) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County identified in 35 Ill. Admin. Code 742 Appendix A. Table G, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above and the materials do not contain special waste or hazardous waste, as determined by the Engineer, the soil shall be managed and disposed of at a landfill as a non-special waste.
 - (6) When analytical results indicate soil is hazardous by characteristic or listing pursuant to 35 Ill. Admin. Code 721, contains radiological constituents, or the Engineer otherwise determines the soil cannot be managed according to Articles 669.05(a)(1)

through (a)(5) above, the soil shall be managed and disposed of off-site as a special waste or hazardous waste as applicable.

(b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.

(1) The pH of the soil is less than 6.25 or greater than 9.0.

(2) The soil exhibited PID or FID readings in excess of background levels.

(c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 Ill. Admin. Code 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way as embankment or fill, when suitable, or managed and disposed of off-site according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.

(d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Ill. Admin. Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste or hazardous waste as applicable. Special waste groundwater shall be containerized and trucked to an off-site treatment facility, or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sanitary sewer or combined sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sanitary sewer or combined sewer.

Groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench, it may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority, or it shall be containerized and trucked to an off-site treatment facility as a special waste or hazardous waste. The Contractor is prohibited from discharging groundwater within the trench through a storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive

soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Contractor shall obtain all documentation including any permits and/or licenses required to transport the material containing regulated substances to the disposal facility. The Contractor shall coordinate with the Engineer on the completion of all documentation. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall coordinate waste disposal approvals with the disposal facility.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation that the Contractor is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.

Transportation and disposal of material classified according to Article 669.05(a)(5) or 669.05(a)(6) shall be completed each day so that none of the material remains on-site by the close of business, except when temporary staging has been approved.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number provided by the Bureau of Design and Environment. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill permitted for disposal of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by their permit and whether the disposal facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The use of a Contractor selected landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

669.06 Non-Special Waste Certification. An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

(a) Definition. A waste is considered a non-special waste as long as it is not:

- (1) a potentially infectious medical waste;
- (2) a hazardous waste as defined in 35 Ill. Admin. Code 721;
- (3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 Ill. Admin. Code 811.107;
- (4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61.141;
- (5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;
- (6) a material subject to the waste analysis and recordkeeping requirements of 35 Ill. Admin. Code 728.107 under land disposal restrictions of 35 Ill. Admin. Code 728;
- (7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or
- (8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.

(b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:

- (1) the means by which the generator has determined the waste is not a hazardous waste;
- (2) the means by which the generator has determined the waste is not a liquid;
- (3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;
- (4) if the waste does not undergo testing, an explanation as to why no testing is needed;

(5) a description of the process generating the waste; and

(6) relevant material safety data sheets.

669.07 Temporary Staging. Soil classified according to Articles 669.05(a)(2), (b)(1), or (c) may be temporarily staged at the Contractor's option. Soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) shall be managed and disposed of without temporary staging to the greatest extent practicable. If circumstances beyond the Contractor's control require temporary staging of these latter materials, the Contractor shall request approval from the Engineer in writing.

Temporary staging shall be accomplished within the right-of-way and the Contractor's means and methods shall be described in the approved or amended RSPCP. Staging areas shall not be located within 200 feet (61 m) of a public or private water supply well; nor within 100 feet (30 m) of sensitive environmental receptor areas, including wetlands, rivers, streams, lakes, or designated habitat zones.

The method of staging shall consist of containerization or stockpiling as applicable for the type, classification, and physical state (i.e., liquid, solid, semisolid) of the material. Materials of different classifications shall be staged separately with no mixing or co-mingling.

When containers are used, the containers and their contents shall remain intact and inaccessible to unauthorized persons until the manner of disposal is determined. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could cause the waste to be reclassified as a hazardous or special waste.

When stockpiles are used, they shall be covered with a minimum 20-mil plastic sheeting or tarps secured using weights or tie-downs. Perimeter berms or diversionary trenches shall be provided to contain and collect for disposal any water that drains from the soil. Stockpiles shall be managed to prevent or reduce potential dust generation.

When staging non-special waste, special waste, or hazardous waste, the following additional requirements shall apply:

- (a) **Non-Special Waste.** When stockpiling soil classified according to Article 669.05(a)(1) or 669.05(a)(5), an impermeable surface barrier between the materials and the ground surface shall be installed. The impermeable barrier shall consist of a minimum 20-mil plastic liner material and the surface of the stockpile area shall be clean and free of debris prior to placement of the liner. Measures shall also be taken to limit or discourage access to the staging area.
- (b) **Special Waste and Hazardous Waste.** Soil classified according to Article 669.05(a)(6) shall not be stockpiled but shall be containerized immediately upon generation in containers, tanks or containment buildings as defined by RCRA, Toxic Substances Control

Act (TSCA), and other applicable State or local regulations and requirements, including 35 Ill. Admin. Code Part 722, Standards Applicable to Generators of Hazardous Waste.

The staging area(s) shall be enclosed (by a fence or other structure) to restrict direct access to the area, and all required regulatory identification signs applicable to a staging area containing special waste or hazardous waste shall be deployed.

Storage containers shall be placed on an all-weather gravel-packed, asphalt, or concrete surface. Containers shall be in good condition and free of leaks, large dents, or severe rusting, which may compromise containment integrity. Containers must be constructed of, or lined with, materials that will not react or be otherwise incompatible with the hazardous or special waste contents. Containers used to store liquids shall not be filled more than 80 percent of the rated capacity. Incompatible wastes shall not be placed in the same container or comingled.

All containers shall be legibly labeled and marked using pre-printed labels and permanent marker in accordance with applicable regulations, clearly showing the date of waste generation, location and/or area of waste generation, and type of waste. The Contractor shall place these identifying markings on an exterior side surface of the container.

Storage containers shall be kept closed, and storage pads covered, except when access is needed by authorized personnel.

Special waste and hazardous waste shall be transported and disposed within 90 days from the date of generation.

669.08 Underground Storage Tank Removal. For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the Department. The Department's Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the "owner" or "operator" of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Admin. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport, and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Admin. Code Part 734.210(h) after the required backfill has been removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the District Environmental Studies Unit (DESU). Upon confirmation of a release of contaminants and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the tank is located and the DESU Manager).

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

- (a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank;
- (b) Identify and mitigate fire, explosion and vapor hazards;
- (c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and
- (d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the tank excavation zone and entered into subsurface structures (such as sewers or basements).

The tank excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

669.09 Regulated Substances Final Construction Report. Not later than 90 days after completing this work, the Contractor shall submit a "Regulated Substances Final Construction Report (RSFCR)" to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

669.10 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

669.11 Basis of Payment. The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

Regulated substances monitoring, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof to the nearest 0.5 calendar day, for REGULATED SUBSTANCES MONITORING.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of UST removal, soil excavation, soil and content sampling, the management of excavated soil and UST content, and UST disposal, will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for

NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

Payment for temporary staging of soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) will be paid for according to Article 109.04. The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

When the waste material for disposal requires sampling for landfill disposal acceptance, the samples shall be analyzed for TCLP VOCs, SVOCs, RCRA metals, pH, ignitability, and paint filter test. The analysis will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS using EPA Methods 1311 (extraction), 8260B for VOCs, 8270C for SVOCs, 6010B and 7470A for RCRA metals, 9045C for pH, 1030 for ignitability, and 9095A for paint filter.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT."

80407

SILT FENCE, INLET FILTERS, GROUND STABILIZATION AND RIPRAP FILTER FABRIC (BDE)

Effective: November 1, 2019

Revised: April 1, 2020

Revise Article 280.02(m) and add Article 280.02(n) so the Standard Specifications read:

- “(m) Above Grade Inlet Filter (Fitted)..... 1081.15(j)
- “(n) Above Grade Inlet Filter (Non-Fitted)..... 1081.15(k)”

Revise the last sentence of the first paragraph in Article 280.04(c) of the Standard Specifications to read:

“The protection shall be constructed with hay or straw bales, silt filter fence, above grade inlet filters (fitted and non-fitted), or inlet filters.

Revise the first sentence of the second paragraph in Article 280.04(c) of the Standard Specifications to read:

“When above grade inlet filters (fitted and non-fitted) are specified, they shall be of sufficient size to completely span and enclose the inlet structure.”

Revise Article 1080.02 of the Standard Specifications to read:

“1080.02 Geotextile Fabric. The fabric for silt filter fence shall consist of woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence.

The fabric for ground stabilization shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 2 and nonwoven fabrics shall be Class 1 according to AASHTO M 288.

The physical properties for silt fence and ground stabilization fabrics shall be according to the following.

PHYSICAL PROPERTIES			
	Silt Fence Woven ^{1/}	Ground Stabilization Woven ^{2/}	Ground Stabilization Nonwoven ^{2/}
Grab Strength, lb (N) ^{3/} ASTM D 4632	123 (550) MD 101 (450) XD	247 (1100) min. ^{4/}	202 (900) min. ^{4/}
Elongation/Grab Strain, % ASTM D 4632 ^{4/}	49 max.	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{4/}	--	90 (400) min.	79 (350) min.

Puncture Strength, lb (N) ASTM D 6241 ^{4/}	--	494 (2200) min.	433 (1925) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{5/}	30 (0.60) max.	40 (0.43) max.	40 (0.43) max.
Permittivity, sec ⁻¹ ASTM D 4491	0.05 min.		
Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355	70 min.	50 min.	50 min.

- 1/ NTPEP results or manufacturer’s certification to meet test requirements.
- 2/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.
- 3/ MD = Machine direction. XD = Cross-machine direction.
- 4/ Values represent the minimum average roll value (MARV) in the weaker principle direction, MD or XD.
- 5/ Values represent the maximum average roll value.”

Revise Article 1080.03 of the Standard Specifications to read:

“1080.03 Filter Fabric. The filter fabric shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 3 for riprap gradations RR 4 and RR 5, and Class 2 for RR 6 and RR 7 according to AASHTO M 288. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. Nonwoven fabrics shall be Class 2 for riprap gradations RR 4 and RR 5, and Class 1 for RR 6 and RR 7 according to AASHTO M 288. After forming, the fabric shall be processed so that the yarns or filaments retain their relative positions with respect to each other. The fabric shall be new and undamaged.

The filter fabric shall be manufactured in widths of not less than 6 ft (2 m). Sheets of fabric may be sewn together with thread of a material meeting the chemical requirements given for the yarns or filaments to form fabric widths as required. The sheets of filter fabric shall be sewn together at the point of manufacture or another approved location.

The filter fabric shall be according to the following.

PHYSICAL PROPERTIES ^{1/}				
	Gradation Nos. RR 4 & RR 5		Gradation Nos. RR 6 & RR 7	
	Woven	Nonwoven	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{2/}	180 (800) min.	157 (700) min.	247 (1100) min.	202 (900) min.
Elongation/Grab Strain, % ASTM D 4632 ^{2/}	49 max.	50 min.	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/}	67 (300) min.	56 (250) min.	90 (400) min.	79 (350) min.
Puncture Strength, lb (N) ASTM D 6241 ^{2/}	370 (1650) min.	309 (1375) min.	494 (2200) min.	433 (1925) min.
Ultraviolet Stability, % retained strength after 500 hours of exposure - ASTM D 4355	50 min.			

1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP's DataMine.

2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

As determined by the Engineer, the filter fabric shall meet the requirements noted in the following after an onsite investigation of the soil to be protected.

Soil by Weight (Mass) Passing the No. 200 sieve (75 μ m), %	Apparent Opening Size, Sieve No. (mm) - ASTM D 4751 ^{1/}	Permittivity, sec ⁻¹ ASTM D 4491
49 max.	60 (0.25) max.	0.2 min.
50 min.	70 (0.22) max.	0.1 min.

1/ Values represent the maximum average roll value.”

Revise Article 1081.15(h)(3)a of the Standard Specifications to read:

“a. Inner Filter Fabric Bag. The inner filter fabric bag shall be constructed of woven yarns or nonwoven filaments made of polyolefins or polyesters with a minimum silt and debris capacity of 2.0 cu ft (0.06 cu m). Woven fabric shall be Class 3 and nonwoven fabric shall be Class 2 according to AASHTO M 288. The fabric bag shall be according to the following.

PHYSICAL PROPERTIES		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{1/}	180 (800) min.	157 (700) min.
Elongation/Grab Strain, % ASTM D 4632 ^{1/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{1/}	67 (300) min.	56 (250) min.
Puncture Strength, lb (N) ASTM D 6241 ^{1/}	370 (1650) min.	309 (1375) min.
Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{2/}	60 (0.25) max.	
Permittivity, sec ⁻¹ ASTM D 4491	2.0 min.	
Ultraviolet Stability, % retained strength after 500 hours of exposure – ASTM D 4355	70 min.	

1/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

2/ Values represent the maximum average roll value.”

Revise Article 1081.15(i)(1) of the Standard Specifications to read:

“(i) Urethane Foam/Geotextile. Urethane foam/geotextile shall be triangular shaped having a minimum height of 10 in. (250 mm) in the center with equal sides and a minimum 20 in. (500 mm) base. The triangular shaped inner material shall be a low density urethane foam. The outer geotextile fabric cover shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters placed around the inner material and shall extend beyond both sides of the triangle a minimum of 18 in. (450 mm). Woven filter fabric shall be Class 3 and nonwoven filter fabric shall be Class 2 according to AASHTO M 288.

(1) The geotextile shall meet the following properties.

PHYSICAL PROPERTIES		
	Woven	Nonwoven
Grab Strength, lb (N) ASTM D 4632 ^{1/}	180 (800) min.	157 (700) min.
Elongation/Grab Strain, % ASTM D 4632 ^{1/}	49 max.	50 min.
Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{1/}	67 (300) min.	56 (250) min.
Puncture Strength, lb (N) ASTM D 6241 ^{1/}	370 (1650) min.	309 (1375) min.

Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{2/}	30 (0.60) max.
Permittivity, sec ⁻¹ ASTM D 4491	2.0 min.
Ultraviolet Stability, % retained strength after 500 hours of exposure – ASTM D 4355	70 min.

1/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

2/ Values represent the maximum average roll value.”

Add the following to Article 1081.15(i) of the Standard Specifications.

“(3) Certification. The manufacturer shall furnish a certificate with each shipment of urethane foam/geotextile assemblies stating the amount of product furnished and that the material complies with these requirements.”

Revise the title and first sentence of Article 1081.15(j) of the Standards Specifications to read:

“(j) Above Grade Inlet Filters (Fitted). Above grade inlet filters (fitted) shall consist of a rigid polyethylene frame covered with a fitted geotextile filter fabric.”

Revise Article 1081.15(j)(2) of the Standard Specifications to read:

(2) Fitted Geotextile Filter Fabric. The fitted geotextile filter fabric shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters. Woven filter fabric shall be Class 3 and nonwoven filter fabric shall be Class 2 according to AASHTO M 288. The filter shall be fabricated to provide a direct fit to the frame. The top of the filter shall integrate a coarse screen with a minimum apparent opening size of 1/2 in. (13 mm) to allow large volumes of water to pass through in the event of heavy flows. The filter shall have integrated anti-buoyancy pockets capable of holding a minimum of 3.0 cu ft (0.08 cu m) of stabilization material. Each filter shall have a label with the following information sewn to or otherwise permanently adhered to the outside: manufacturer’s name, product name, and lot, model, or serial number. The fitted geotextile filter fabric shall be according to the table in Article 1081.15(h)(3)a above.”

Add Article 1081.15(k) to the Standard Specifications to read:

“(k) Above Grade Inlet Filters (Non-Fitted). Above grade inlet filters (non-fitted) shall consist of a geotextile fabric surrounding a metal frame. The frame shall consist of either a) a circular cage formed of welded wire mesh, or b) a collapsible aluminum frame, as described below.

(1) Frame Construction.

- a) Welded Wire Mesh Frame. The frame shall consist of 6 in. x 6 in. (150 mm x 150 mm) welded wire mesh formed of #10 gauge (3.42 mm) steel conforming to ASTM A 185. The mesh shall be 30 in. (750 mm) tall and formed into a 42 in. (1.05 m) minimum diameter cylinder.
 - b) Collapsible Aluminum Frame. The collapsible aluminum frame shall consist of grade 6036 aluminum. The frame shall have anchor lugs that attach it to the inlet grate, which shall resist movement from water and debris. The collapsible joints of the frame shall have a locking device to secure the vertical members in place, which shall prevent the frame from collapsing while under load from water and debris.
- (2) Geotextile Fabric. The geotextile fabric shall consist of woven yarns or nonwoven filaments made of polyolefins or polyesters. The woven filter fabric shall be a Class 3 and the nonwoven filter fabric shall be a Class 2 according to AASHTO M 288. The geotextile fabric shall be according to the table in Article 1081.15(h)(3)a above.
- (3) Geotechnical Fabric Attachment to the Frame.
- a) Welded Wire Mesh Frame. The woven or nonwoven geotextile fabric shall be wrapped 3 in. (75 mm) over the top member of a 6 in. x 6 in. (150 mm x 150 mm) welded wire mesh frame and secured with fastening rings constructed of wire conforming to ASTM A 641, A 809, A 370, and A 938 at 6 in. (150 mm) on center. The fastening rings shall penetrate both layers of geotextile and securely close around the steel mesh. The geotextile shall be secured to the sides of the welded wire mesh with fastening rings at a spacing of 1 per sq ft (11 per sq m) and securely close around a steel member.
 - b) Collapsible Aluminum Frame. The woven or nonwoven fabric shall be secured to the aluminum frame along the top and bottom of the frame perimeter with strips of aluminum secured to the perimeter member, such that the anchoring system provides a uniformly distributed stress throughout the geotechnical fabric.
- (4) Certification. The manufacturer shall furnish a certificate with each shipment of above grade inlet filter assemblies stating the amount of product furnished and that the material complies with these requirements.”

80419

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

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

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

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

80397

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

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

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

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

80391

TRAFFIC CONTROL DEVICES - CONES (BDE)

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

80409

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

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

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 2 . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

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

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

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

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

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

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

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

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

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

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

METHOD OF MEASUREMENT The unit of measurement is in hours.

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

20338

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: April 1, 2016

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

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

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

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

"(11) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.

- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

"(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C).
WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

| Revised: April 2, 2015

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

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

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

80302

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports 1106.02”

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

“For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer’s specifications.”

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

“**701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer’s self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device.”

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

“**1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 1 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 2 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact

attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH-16 compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH-16 compliant is available, an NCHRP 350 or MASH-2009 compliant device may be used, even if manufactured after December 31, 2019.”

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) to read:

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.”

80427

**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 contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of

Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.