

159

Letting April 24, 2020

Notice to Bidders, Specifications and Proposal



**Contract No. 95870
MACON County
Section 18-00805-00-BR (DeCatur)
Route FAU 7426 (Taylor Road)
Project NYLK-883 ()
District 7 Construction Funds**

Prepared by	
Checked by	F

(Printed by authority of the State of Illinois)



- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 10:00 a.m. April 24, 2020 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. 95870
MACON County
Section 18-00805-00-BR (DeCatur)
Project NYLK-883 ()
Route FAU 7426 (Taylor Road)
District 7 Construction Funds**

Replace the bridge carrying Taylor Road over Ward Branch, 0.6 miles south of IL 48 in Decatur.

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

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

By Order of the
Illinois Department of Transportation

Omer Osman,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2020

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 1-1-20)

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BDE SPECIAL PROVISIONS

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

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
* 80099			Accessible Pedestrian Signals (APS)	April 1, 2003	April 1, 2020
80274	104	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	
80384	107	X	Compensable Delay Costs	June 2, 2017	April 1, 2019
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293			Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80277			Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387			Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
80029	111	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Mar. 2, 2019
80402	121	X	Disposal Fees	Nov. 1, 2018	
80378			Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
80405			Elastomeric Bearings	Jan. 1, 2019	
80421			Electric Service Installation	Jan. 1, 2020	
80415	123	X	Emulsified Asphalts	Aug. 1, 2019	
80423			Engineer's Field Office Laboratory	Jan. 1, 2020	
80388	126	X	Equipment Parking and Storage	Nov. 1, 2017	
80229			Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80417	127	X	Geotechnical Fabric for Pipe Underdrains and French Drains	Nov. 1, 2019	
80420			Geotextile Retaining Walls	Nov. 1, 2019	
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2017
80422			High Tension Cable Median Barrier Reflectors	Jan. 1, 2020	
80416	129	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, 2020
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	136	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	
80424			Micro-Surfacing and Slurry Sealing	Jan. 1, 2020	
* 80428	138	X	Mobilization	April 1, 2020	
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80412			Obstruction Warning Luminaires, LED	Aug. 1, 2019	
80349			Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
80371			Pavement Marking Removal	July 1, 2016	
80389	139	X	Portland Cement Concrete	Nov. 1, 2017	

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80359	140	X	Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2019
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306	142	X	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 2, 2020
80407	152	X	Removal and Disposal of Regulated Substances	Jan. 1, 2019	Jan. 1, 2020
* 80419	163	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	169	X	Steel Plate Beam Guardrail Manufacturing	Jan. 1, 2019	
80413			Structural Timber	Aug. 1, 2019	
80397	170	X	Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	171	X	Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	Aug. 1, 2019
80298			Temporary Pavement Marking	April 1, 2012	April 1, 2017
80403	172	X	Traffic Barrier Terminal, Type 1 Special	Nov. 1, 2018	
80409	173	X	Traffic Control Devices – Cones	Jan. 1, 2019	
80410			Traffic Spotters	Jan. 1, 2019	
20338			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	174	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	176	X	Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
* 80414			Wood Fence Sight Screen	Aug. 1, 2019	April 1, 2020
* 80427			Work Zone Traffic Control Devices	Mar. 2, 2020	
80071	177	X	Working Days	Jan. 1, 2002	

The following special provisions are in the 2020 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>
80404	Coarse Aggregate Quality for Micro-Surfacing and Cape Seals	Article 1004.01(b)	Jan. 1, 2019	
80392	Lights on Barricades	Articles 701.16, 701.17(c)(2) & 603.07	Jan. 1, 2018	
80336	Longitudinal Joint and Crack Patching	Check Sheet #36	April 1, 2014	April 1, 2016
80400	Mast Arm Assembly and Pole	Article 1077.03(b)	Aug. 1, 2018	
80394	Metal Flared End Section for Pipe Culverts	Articles 542.07(c) and 542.11	Jan. 1, 2018	April 1, 2018
80390	Payments to Subcontractors	Article 109.11	Nov. 2, 2017	

The following special provisions have been deleted from use.

<u>File Name</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80328	Progress Payments	Nov. 2, 2013	

GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET

Effective as of the: November 8, 2019 Letting

Pg #	√	File Name	Title	Effective	Revised
		GBSP 4	Polymer Modified Portland Cement Mortar	June 7, 1994	Apr 1, 2016
		GBSP 12	Drainage System	June 10, 1994	Jun 24, 2015
		GBSP 13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Apr 1, 2016
		GBSP 14	Jack and Remove Existing Bearings	April 20, 1994	April 13, 2018
		GBSP 15	Three Sided Precast Concrete Structure	July 12, 1994	Dec 21, 2016
		GBSP 16	Jacking Existing Superstructure	Jan 11, 1993	April 13, 2018
		GBSP 17	Bonded Preformed Joint Seal	July 12, 1994	Aug 9, 2019
		GBSP 18	Modular Expansion Joint	May 19, 1994	Aug 9, 2019
		GBSP 21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	Aug 9, 2019
		GBSP 25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	Apr 22, 2016
		GBSP 26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	Apr 22, 2016
		GBSP 28	Deck Slab Repair	May 15, 1995	April 13, 2018
		GBSP 29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	March 1, 2019
		GBSP 30	Bridge Deck Latex Concrete Overlay	May 15, 1995	Oct 20, 2017
		GBSP 31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	March 1, 2019
		GBSP 33	Pedestrian Truss Superstructure	Jan 13, 1998	Dec 29, 2014
		GBSP 34	Concrete Wearing Surface	June 23, 1994	Oct 4, 2016
		GBSP 35	Silicone Bridge Joint Sealer	Aug 1, 1995	Oct 15, 2011
		GBSP 45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Feb 6, 2013
178	X	GBSP 51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
		GBSP 53	Structural Repair of Concrete	Mar 15, 2006	Aug 9, 2019
		GBSP 55	Erection of Curved Steel Structures	June 1, 2007	
		GBSP 56	Setting Piles in Rock	Nov 14, 1996	Apr 1, 2016
		GBSP 59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	Mar 29, 2017
		GBSP 60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	Apr 22, 2016
179	X	GBSP 61	Slipform Parapet	June 1, 2007	March 1, 2019
		GBSP 67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	Oct 5, 2015
		GBSP 71	Aggregate Column Ground Improvement	Jan 15, 2009	Oct 15, 2011
		GBSP 72	Bridge Deck Fly Ash or GGBF Slag Concrete Overlay	Jan 18, 2011	March 1, 2019
		GBSP 75	Bond Breaker for Prestressed Concrete Bulb-T Beams	April 19, 2012	
		GBSP 77	Weep Hole Drains for Abutments, Wingwalls, Retaining Walls And Culverts	April 19, 2012	Oct 22, 2013
184	X	GBSP 78	Bridge Deck Construction	Oct 22, 2013	Dec 21, 2016
		GBSP 79	Bridge Deck Grooving (Longitudinal)	Dec 29, 2014	Mar 29, 2017
		GBSP 81	Membrane Waterproofing for Buried Structures	Oct 4, 2016	March 1, 2019
		GBSP 82	Metallizing of Structural Steel	Oct 4, 2016	Oct 20, 2017
		GBSP 83	Hot Dip Galvanizing for Structural Steel	Oct 4, 2016	Oct 20, 2017
		GBSP 85	Micropiles	Apr 19, 1996	Aug 9, 2019
		GBSP 86	Drilled Shafts	Oct 5, 2015	Oct 4, 2016
		GBSP 87	Lightweight Cellular Concrete Fill	Nov 11, 2011	Apr 1, 2016
		GBSP 88	Corrugated Structural Plate Structures	Apr 22, 2016	April 13, 2018
186	X	GBSP 89	Preformed Pavement Joint Seal	Oct 4, 2016	March 1, 2019
		GBSP 90	Three Sided Precast Concrete Structure (Special)	Dec 21, 2016	April 13, 2018
		GBSP 91	Crosshole Sonic Logging Testing of Drilled Shafts	Apr 20, 2016	Aug 9, 2019
		GBSP 92	Thermal Integrity Profile Testing of Drilled Shafts	Apr 20, 2016	

Pg #	√	File Name	Title	Effective	Revised
		GBSP 93	Preformed Bridge Joint Seal	Dec 21, 2016	March 1, 2019
		GBSP 94	Warranty for Cleaning and Painting Steel Structures	Mar 3, 2000	Nov 24, 2004
		GBSP 95	Bituminous Coated Aggregate Slopewall	Mar 21, 1997	Mar 19, 2018
		GBSP 96	Erection of Bridge Girders Over or Adjacent to Railroads	Aug 9, 2019	

LIST ANY ADDITIONAL SPECIAL PROVISIONS BELOW

The following Guide Bridge Special Provisions have been incorporated into the 2016 Standard Specifications:

File Name	Title	Std Spec Location
GBSP32	Temporary Sheet Piling	522
GBSP38	Mechanically Stabilized Earth Retaining Walls	522
GBSP42	Drilled Soldier Pile Retaining Wall	522
GBSP43	Driven Soldier Pile Retaining Wall	522
GBSP44	Temporary Soil Retention System	522
GBSP46	Geotextile Retaining Walls	522
GBSP57	Temporary Mechanically Stabilized Earth Retaining Walls	522
GBSP62	Concrete Deck Beams	504
GBSP64	Segmental Concrete Block Wall	522
GBSP65	Precast Modular Retaining Wall	522
GBSP73	Cofferdams	2017 Supp
GBSP74	Permanent Steel Sheet Piling (LRFD)	522
GBSP76	Granular Backfill for Structures	2017 Supp
GBSP80	Fabric Reinforced Elastomeric	1028
GBSP84	Precast, Prestressed Concrete Beams	2017 Supp

The following Guide Bridge Special Provisions have been discontinued or have been superseded:

File Name	Title	Disposition:
GBSP70	Braced Excavation	Use TSRS per Sec 522
GBSP95	Bridge Deck Concrete Sealer	Use July 1, 2012 version for Repair projects only

SPECIAL PROVISIONS

INTRODUCTION

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted April 1, 2016; the latest edition of the "Illinois Manual of Uniform Traffic Control Devices for Streets and Highways" and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications adopted January 1, 2020 and the Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAU 7426 (Taylor Rd.) over Ward Branch in The City of Decatur, Section 18-00805-00-BR, and in case of conflict with any part, or parts, of said specifications, the Special Provisions shall take precedence and shall govern.

DESCRIPTION OF WORK

The work included in this contract consists of: (1) The complete removal and replacement of the existing single-span structure (058-6002), (2) HMA Full Depth Pavement with Aggregate Subgrade Improvement on the approach roadway, (3) A5 Riprap with filter fabric and (4) Seeding and other collateral work

PROJECT MAINTENANCE

Should the City determine that an unsafe condition exists within the scope of this project; the City will attempt to contact the Contractor to resolve the unsafe condition. However, if the City is unable to contact the Contractor's designated representative or if the Contractor fails to respond within a four (4) hour period, the City may perform the necessary operations and the cost for time and materials will be deducted from the contract.

CONTRACTOR AVAILABILITY

At all times when work is being performed (by Contractor or subcontractor), the prime Contractor shall have on the job site someone in his/her direct employ who is capable of meeting with the Engineer and making decisions. If authorized by the Engineer, this condition may be satisfied by having a telephone number of someone who satisfies the above requirements.

CONTRACTOR RESPONSIBILITY

The contract plans indicate the location and elevations of the proposed work. Minor changes in the locations and elevations may be directed by the Engineer. Minor changes requested by the Engineer will be made without additional compensation to the Contractor.

Any inconveniences, delays or additional expenses incurred by the Contractor in complying with Special Provisions shall not be a basis for additional payment, and shall be considered included in the contract.

PUBLIC SAFETY AND CONVENIENCE

The Contractor shall at all times conduct his work so as to ensure the least possible obstruction to traffic and inconvenience to the general public and residents in the vicinity of the work, and to ensure the protection of persons and property in a manner satisfactory to the Engineer. Roads within the project limits will be closed to thru traffic as indicated in the Traffic Control Plan. The Contractor is responsible for all traffic guidance and detours within the project limits. City of Decatur and Local emergency agencies shall be notified 21 days in advance of any full road closure.

CONSTRUCTION ACCESS

The contractor shall present a plan of the access that will be used during construction of said project by the Contractor or Subcontractor to the Engineer at the time of the Pre-Construction Meeting. The Engineer and Contractor shall both examine the plan noting any areas of concern before construction begins.

Upon completion of the project the Engineer shall examine the streets prior to approving final payment to the Contractor. Any areas that have been damaged, due to construction activity, shall be repaired by the Contractor to the satisfaction of the Engineer. When work is complete, the Contractor shall arrange, within a reasonable time, to clean up and restore areas where equipment or material has been stored on the right-of-way or easement. This work shall be included in the cost of the contract.

The Engineer may restrict the movement of construction vehicles on the completed surface to prevent damage to these surfaces.

TRAFFIC CONTROL PLAN

Traffic Control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, these special provisions, and any special details and Highway Standards contained herein and in the plans. Layout and maintenance of the traffic control devices shall be the responsibility of the Contractor. The appropriate traffic control devices shall be utilized for the various construction activities being performed by the Contractor.

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

Standard 701901

Standard BLR-21

FAU 7426 (Taylor Rd.) shall be closed to all traffic at the north and south project limits. Local residents shall be allowed access in accordance with the provisions of Articles 107.09 and 107.14 of the Standard Specifications. At no time, shall private or commercial entrances be closed for an extended period of time, as determined by the Engineer.

During the road closure and corresponding operations the contractor shall maintain a suitable access for emergency vehicle and mail carrier passage through the project area onto private residences. After daily operations are completed by the contractor, ramps shall be constructed to facilitate in the emergency vehicle passage if needed after work hours. This work and all cost incurred by it shall be considered as included in the contract unit price for TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21.

Type III barricades conforming to Standard 701901 shall be erected pursuant to Standard BLR 21 and shall extend from shoulder break to shoulder break at the construction limits of the closed area as directed by the Engineer except that two (2) Type A Flashing Lights shall be located above each Type III barricade. Advance warning signs conforming to Standard 701901 shall be erected pursuant to Standard BLR 21 as directed by the Engineer except that One (1) Type A Flashing Light shall be located above each advance warning sign.

The Contractor shall be responsible for preventing public use of any temporary low water crossings.

This work will not be paid for separately but shall be considered in the contract unit price, LUMP SUM, for TRAFFIC CONTROL AND PROTECTION, STANDARD, BLR 21, which includes all labor, equipment and materials necessary to perform the work for the duration of the project.

UTILITIES

The Contractor shall take all precautions necessary to protect the property of the various public and private utilities which may be located underground or above ground, at or adjacent to the site of this improvement. The Contractor shall repair or replace at his/her own expense, or bear the cost to repair or replace, any utility property that has been damaged through his/her actions. The procedures and specifications of repair will be in accordance with the regulation of and/or policy of the affected utility.

The adjustment and/or relocation of the private utilities will be the responsibility of the utility companies involved. It is possible that such adjustments may be underway during the construction of this contract. In such an event, the Contractor shall cooperate with the various agencies involved in accordance with Article 105.07 of the Standard Specifications.

The Contractor's attention is directed to the fact that there exists within the State of Illinois Joint Utility Locating Information for Excavators (J.U.L.I.E.) System. All utility companies and municipalities, which have gas mains, and a number of others, are a part of this system.

The Contractor shall contact the Joint Utility Locating Information for Excavators System (J.U.L.I.E.)

(800) 892-0123 a minimum of forty-eight hours in advance of any excavation work. The political name of the township where the work is located, as shown on the cover sheet, along with other location information such as the land section and quarter section will be required by J.U.L.I.E. at the time of the call.

It is understood and agreed the Contractor has considered in his bid all the permanent and temporary utility appurtenances in their present or relocated positions.

STATUS OF UTILITIES

Name and Contact of Utility	Type	Location	Estimated Date Relocation Complete
Ameren IP – (South) 370 S Main St. Decatur, IL 62523 Phone: (888) 659-4540 Contact: Construction Department	Gas	West Side	During Construction
Ameren IP – (South) 370 S Main St. Decatur, IL 62523 Phone: (888) 659-4540 Contact: Construction Department	Electric/Lighting	East/West Side	During Construction
Comcast Decatur, IL Phone: (224) 229-5849 Contact: Robert Stoll	Aerial Cable	East Side	During Construction
City of Decatur 1 Gary K. Anderson Plaza Decatur, IL 62523 Phone: (217) 521-7570 Contact: Don Cisco	Water	East Side	During Construction <u>By Contractor</u>
Sanitary District of Decatur 510 Dipper Lane Decatur, IL 62522 Phone: (217) 422-6931 Ext: 216 Contact: Don Miller	Sanitary	West Side	Not Anticipated

J.U.L.I.E. 1-800-892-0123

The above represents the best information of the Department and is included solely for the convenience of the bidder. The applicable provisions of Articles 105.07 and 107.20 of the Standard Specifications for Road and Bridge Construction shall apply.

The Contractor should notify the Engineer, in writing, of any utility adjustment or removal, which has not been completed as required for the Contractor's operations. A request, for an extension of time only, will be considered to the extent the Contractor's operations were affected.

SEEDING, CLASS 2 (SPECIAL)

The work shall be performed in accordance with Section 250 and 251 of the Standard Specifications and the following provisions.

Replace the third paragraph of Article 250.04 with the following:

"Fertilizer nutrients shall be applied at a rate of 420 lb of actual fertilizer nutrients per acre. The fertilizer shall be applied at the rate of 1:4:2 as follows:

Nitrogen Fertilizer Nutrients	60 lb/Ac
Phosphorus Fertilizer Nutrients	240 lb/Ac
Potassium Fertilizer Nutrients	120 lb/Ac

Revise the first sentence of the first paragraph of Article 1081.08 to read as follows:

"The fertilizer furnished shall be a ready mixed material having a ratio of (1-4-2)."

Revise the sixth sentence of the first paragraph of Article 250.06 to read as follows:

"When seed or fertilizer is applied with a hydraulic seeder the rate of application shall not be less than 570 gallons of slurry per acre."

Under Article 250.07 – Seeding Mixtures

For the purpose of this contract, no seeding will be permitted when the ground is frozen, wet or in any otherwise untillable condition.

Mulching seeded areas shall be performed in accordance with Article 251.03 (b) Method 2.

Revise Articles 250.10 and 251.06 so that the following applies:

This work shall be paid for at the contract unit price per acre for SEEDING, CLASS 2 (SPECIAL). The items of Mulch and Fertilizer Nutrients will not be paid for separately but shall be considered as included to the contract unit price per acre for SEEDING CLASS 2 (SPECIAL).

TEMPORARY STREAM CROSSING

Should the Contractor elect to construct a temporary stream crossing of any nature, the Contractor shall adhere to all applicable permit and certificate requirements and conditions as well as the conditions contained in Check Sheet Item 8 of the Illinois Department of Transportation Supplemental Specifications and Recurring Special Provisions adopted January 1, 2020.

No additional time will be allowed under the contract for the work of this item.

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

RIGHT-OF-WAY

Any fences, enclosures, buildings or other structures on the existing right-of-way shall be removed by the Contractor, as directed by the Engineer, and disposed of by the Contractor at his expense unless noted otherwise in the plans. This work shall be considered as included in the contract and no additional compensation shall be allowed.

If the Engineer directs the Contractor to construct any temporary or permanent fences or enclosures, the work shall be performed by agreed unit price or extra work in accordance with Article 109.04 of the Standard Specifications.

PROTECTION AND RESTORATION OF TRAFFIC SIGNS

The work of this item shall be performed in accordance with Article 107.25 of the Standard Specifications and the following provisions:

Replace the second sentence in the second paragraph with the following:

Signs that are not to be re-erected shall become the property of the City of Decatur and shall be transported and placed, by the Contractor, at the City of Decatur Maintenance Shed located at 2600 N. Jasper St., Decatur, IL as directed by the Engineer.

REMOVAL OF UNCLASSIFIED MATERIALS

Unclassified materials shall be removed at the locations shown on the plans or designated by the Engineer. The removed materials shall be disposed of outside the limits of the right-of-way in accordance with Article 202.03 of the Standard Specifications and as directed by the Engineer. This work will not be paid for separately but shall be considered as included in the contract unit price per CUBIC YARD for EARTH EXCAVATION, which price shall include all labor, equipment and materials necessary to complete the work.

MEASUREMENTS OF GRANULAR MATERIALS

When any granular material is to be measured in tons in the plans or specifications, it will be mandatory for the Contractor to furnish truck scale tickets. All granular materials shall be weighed on certified scales.

Any costs incurred due to furnishing approved scales and weighing the various aggregates as described herein will not be paid for separately but shall be considered as included in the contract unit price per ton for the various items in which the granular material is incorporated.

REMOVAL OF EXISTING STRUCTURES

The work for this item shall be performed in accordance with Section 501 of the Standard Specifications and as directed by the Engineer.

The existing structure to be removed consists of: a single-span steel multi-beam bridge on fracture-critical steel abutment cap beam supported on concrete pedestals. Sheet pile abutment/wingwalls retain the soil at the abutments.

Removal shall include but not be limited to the superstructure, substructure including substructure components from previous construction, sheet pile retaining/wing walls, wearing surface and all appurtenances. Excavation of earth necessary to perform the removal of existing structures will not be measured for payment. Backfilling shall consist of placing and compacting the necessary fill within the space excavated for a structure below the ground surface, as it existed before any excavation was made. Any fill necessary to fill a void from removal of existing structure shall be placed according to Article 502.10 and shall be considered included in the unit price for REMOVAL OF EXISTING STRUCTURES. No additional compensation will be allowed because of variation from the assumed thickness or dimensions shown on the plans.

The existing structures shall be disposed of by the Contractor, in accordance with all applicable State and Federal laws and at a site outside the Right-of-Way in accordance with Section 501 of the Standard Specifications.

The work for this item, including excavation and utility coordination, will not be paid for separately but shall be considered as included in the contract unit price per EACH for REMOVAL OF EXISTING STRUCTURES and no additional compensation will be allowed.

SHOP DRAWINGS

The Contractor shall be required to submit shop drawings to the Engineer in accordance with Section 105.04 of the Standard Specifications. The Contractor shall also concurrently submit two sets of shop drawings to WHKS & Co., 3695 6th Street Frontage Road West, Suite A, Springfield, IL 62703 for preliminary review. Shop drawings will be reviewed and returned to the Contractor. The Contractor shall submit corrected shop drawings for final review. The final reviewed shop drawings will be returned to the Contractor for distribution. The Contractor shall be responsible for the final distribution of the reviewed shop drawings in accordance with the Standard Specifications. Any work completed or materials ordered prior to the final approval of such shop drawings shall be at the Contractor's own risk. The cost of this work shall be considered as included with the contract.

PRECAST SHOP DRAWINGS

The Contractor shall have two sets of shop drawings submitted to WHKS & Co., 3695 6th Street Frontage Road West, Suite A, Springfield, IL 62703 for preliminary review.

Upon completion of the preliminary review of the shop drawings, the Contractor shall have nine (9) sets of corrected shop drawings submitted for final review. Eight (8) sets of the final reviewed shop drawings will be returned to the Contractor for distribution.

The Contractor shall be responsible for the final distribution of the reviewed shop drawings in accordance with the chart below. The cost of this work shall be considered as included with the contract.

PRINTS SET TO:	NUMBER OF PRINTS
LOCAL BRIDGES	
DISTRIBUTION OF PRECAST BEAM SHOP DRAWINGS	
Regional Engineer (Where erection is located)	1
Contractor	2
County Engineer or City Engineer	2
Engineer of Materials 126 East Ash Street Springfield, Illinois 62706	1
Inspection District – (See below)	2
Total Prints	8

INSPECTION DISTRICT:

Fabrication at Price Brothers – Midwest (Rochelle)
2 sets – Mr. Paul Loete, Attn: Materials Engineer

Fabrication at Construction Products Corporation (Henderson, Kentucky)
2 sets – Mr. Jeffrey Keirn, Attn: Materials Engineer

Fabrication at Construction Products Corporation (LaFayette, Indiana)
2 sets – Mr. Kensil Garnett, Attn: Materials Engineer

Fabrication at Champaign-Illinois Concrete Products Co. (Champaign)
2 sets – Mr. Kensil Garnett, Attn: Materials Engineer

Fabrication at Prestress Engineering Corporation (Blackstone)
2 sets – Mr. Paul Loete, Attn: Materials Engineer

Fabrication at Stites Concrete Incorporated (Dexter, Missouri)
2 sets – Mr. Jeffrey Keirn, Attn: Materials Engineer

Fabrication at County Materials Corporation (Salem)
2 sets – Mr. Jeffrey Keirn, Attn: Material Engineer

Fabrication at Construction Systems Inc. – Keeler-Webb (Edwardsville)
2 sets – Mr. Jeffrey Keirn, Attn: Materials Engineer

SAW CUTTING EXISTING CONSTRUCTION

This work shall include saw cutting existing pavement, shoulders, curb and gutter, islands and medians both transversely and longitudinally prior to their removal to protect the existing items to remain in place.

Saw cuts shall be made full-depth to provide a square face for abutting future construction. The work shall be completed in accordance with the applicable portions of Section 442 of the Standard Specifications and as direct by the Engineer.

This work shall not be paid for separately, but considered included in the cost of the item being removed and no additional compensation will be allowed.

PAVEMENT REMOVAL

This work shall be performed in accordance with Section 440 except as follows:

Add the following sentence to the second paragraph of Article 440.01: Pavement removal shall also be defined as built-up oil and chip wearing surfaces over stabilized subbase.

The existing pavement thickness shown in the plans is estimated and is shown for information only. No additional compensation will be allowed to remove the pavement if the thickness varies from what is shown on the plans.

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED)

This work shall be performed in accordance with the applicable portions of Section 606 of the Standard Specifications, the plan details, and as noted herein. Special attention is called to the width and gutter slope as shown in the Proposed Typical Section in the plans.

Basis of Payment - This work will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED).

EARTH EXCAVATION

This work shall consist of the excavation and transportation of suitable excavated material to embankment locations of the excavation in accordance with the applicable portions of Sections 201 and 202 of the Standard Specifications.

The removal and satisfactory off-site disposal of all unsuitable earth material throughout the limits of the project shall be considered included with EARTH EXCAVATION.

The Contractor shall strip the vegetation and excavate and stockpile existing topsoil material so that it can be reused on the disturbed areas during the embankment operations. The work associated with completing stripping and placement of topsoil shall be included in the price for EARTH EXCAVATION.

Unsuitable material shall include but not be limited to trash, solid waste, concrete rubble, bricks, or any other foreign unsuitable earth material. These materials will not be allowed for embankment and the cost to remove and dispose of them off-site shall be included in the cost for EARTH EXCAVATION.

This work shall be measured and paid for at the contract unit price per cubic yard for EARTH EXCAVATION.

WATER MAIN AND APPURTENANCES

Provide the water distribution system as shown on the Plans, specified herein, and as needed for a complete and proper installation in accordance with Section 561 of the Standard Specifications, City of Decatur Standard Specifications for Water Main Construction and the latest edition of the "Standard Specifications for Water and Sewer Construction in Illinois".

The locations and depths of the relocated water main shown on the plans are approximate and assume installation by means of Horizontal Directional Drilling (HDD) in accordance with City of Decatur Standards. Contractor may elect to install watermain by open cut method, in which case,

all excavation, backfilling, water diversion, thrust blocks and any other miscellaneous items required for construction will not be paid for separately and shall be included with the contract unit price per linear FOOT for WATER MAIN, of the size specified and no additional payment will be allowed.

CONNECTION TO EXISTING WATER MAIN

The Contractor shall perform cut-in connections to the existing water main at locations shown on the drawings and in the manner detailed. Connecting to the existing water main will require interruption of services. The superintendent of the Utility (City), the Engineer, and the Contractor shall mutually agree upon a date and time which will allow ample time to assemble labor and materials and to notify all customers affected. The City shall notify customers at least 24 hours but not more than 48 hours prior to being taken out of service.

Mechanical Joint (MJ) Adapters shall be PE 4710 HDPE, minimum cell classification of 445474C as determined by ASTM D 3350. MJ adapters shall have a pressure rating equal to the pipe unless otherwise specified on the plans. The adapters shall be designed to be fused to the HDPE pipe and restrained to the Ductile Iron MJ hub. The MJ adapter shall be provided with a stainless-steel stiffener insert.

The Contractor shall not operate valves on existing mains. Valves will be closed and opened only by the employees of the City's Public Works Department. The Contractor shall expose the water main to be connected to and shall confirm the size and type of piping present.

The Contractor shall obtain the necessary materials required to make a proper connection. The Contractor shall not proceed until all the required materials are on site. The Contractor shall limit the time for connections on the specified diameter lines from 9:00 am to 3:00 pm. In no case, shall a customer(s) be out of service overnight.

All excavation under and within two (2) feet of any pavement, curb and gutter or sidewalk shall be backfilled with trench backfill.

The time and procedure for the flushing of new water mains shall be approved by the City's Water Distribution Supervisor and the Engineer to ensure any special water distribution system considerations are addressed.

Hydrostatic tests will be performed according to Section 13 of the American Water Works Association Specifications, Designation: AWWA C600 and as may be amended by the City of Decatur. The water main will be subjected to the hydrostatic pressure and leakage tests specified by the water main owner. Water of satisfactory bacteriological quality for drinking purposes for making the hydrostatic and leakage tests will be provided by the City of Decatur at no expense to the Contractor.

Testing and disinfecting water mains shall be in accordance with the City of Decatur Standard Specification for Water Main Construction.

Once the new water mains have been tested and approved for service, then the Contractor shall, under the direction of the Engineer, place the new water main in service.

The entire length of water main of the specified diameter placed out of service for the purpose of making the connections of the proposed water main to the existing water main shall be disinfected before the existing water main is returned to service. The Contractor shall reimburse the City of Decatur for the cost of overtime inspection beyond the normal eight (8) hour day, 7:00 a.m. – 3:30 p.m. (with 0.5 hr lunch allotment) including weekend and holidays.

Dewatering, if required, shall be considered included in the cost of the contract.

Contractor shall submit such product literature and catalog cuts of materials to be supplied to relate these materials to the specification.

Contractor shall be responsible for recording depth and location of all water main and appurtenances constructed. Contractor shall provide the Owner with one set of (minimum) 11-inch by 17-inch drawings indicating information requested herein. Information shall be hand drawn and legible.

Contractor shall submit test certifications for project closeout.

This work shall be measured per EACH connection to an existing water main. Trench backfill used while connecting to the existing water main will be measured separately as TRENCH BACKFILL.

This work will be paid for at the contract unit price per EACH for CONNECTION TO EXISTING WATER MAIN for specified diameter, which price shall include all labor, equipment and materials, necessary fittings, necessary bends, and other materials (not listed for payment separately) required to properly connect to existing water mains. One connection to existing water main will be paid for each location where a mechanical joint adapter is used to connect new water main to the existing water main. Fittings required for these connections will be considered in the contract unit price for CONNECTION TO EXISTING WATER MAINS for specified diameter. Trench backfill used while connecting to the existing water main will be paid for separately as TRENCH BACKFILL.

ABANDON EXISTING WATERMAIN, FILL WITH CSLM

This work shall consist of the abandonment and partial removal of existing water main and filling with controlled low strength material (CLSM). This work shall include all necessary appurtenances to abandon the existing watermain and shall consist of, but not limited to, excavation, cutting existing watermain, draining, filling the existing watermain with controlled low strength material (CLSM) in accordance with Section 1019 of the Standard Specifications. The abandoned water main shall be mechanically capped on each end of the abandoned section. Disconnecting and abandoning the existing water main shall only occur after all water services have been transferred to the proposed water main.

Portions of the water main to be abandoned that interfere with new construction or relocated utilities

may need to be partially removed. The remaining portions will need to be capped at each end and filled. Any portion of the watermain removed due to interference with new construction shall not be paid for separately but shall be included in the cost of ABANDON EXISTING WATER MAIN, FILL WITH CLSM.

All excavation under and within two (2) feet of any pavement, curb and gutter or sidewalk shall be backfilled with trench backfill.

Contractor shall submit CLSM mix design and abandonment procedure to the City for approval prior to abandonment.

This work shall be measured per linear FOOT for water main to be abandoned. Trench backfill used while abandoning the existing water main will be measured separately as TRENCH BACKFILL.

This work shall be paid for at the contract unit price per linear FOOT for ABANDON EXISTING WATER MAIN, FILL WITH CLSM, which price shall include all labor, equipment and materials, and necessary fittings required to remove and properly abandon the water main. Trench backfill used while abandoning the existing water main will be paid for separately as TRENCH BACKFILL.

WATER MAIN

This work shall consist of constructing High Density Polyethylene (HDPE) water main at the locations indicated in the plans or as directed by the Engineer. In addition to this special provision, this work shall be in accordance with the Section 561 of the Standard Specifications, City of Decatur Standard Specifications for Water Main Construction and "Standard Specifications for Water and Sewer Construction in Illinois".

All water main connections and/or disconnections shall be done in such a manner as to not have any resident without water for more than four (4) hours. The connections and/or disconnections shall be reviewed with the Engineer. Water service shall not be disrupted without the prior consent of the Engineer.

The watermain shall be constructed with High Density Polyethylene Pipe. HDPE pipe shall be manufactured from a PE 4710 resin listed with the Plastic Pipe Institute (PPI) in TR-4. The resin material will meet the specifications of ASTM D 3350 with a minimum cell classification of 445474C. Pipe shall have a manufacturing standard of ASTM F 714. Pipe O.D. sizes 4" to 24" shall be ductile iron pipe sizes (DIPS). Pipe shall be DR 11 for pipe sizes up to 24" unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipes shall be suitable for use as pressure conduits, listed as NSF 61, and per AWWA C906 Pressure Class (PC) 160, shall have a nominal burst value of three and on-half times the Working Pressure Rating (WPR) of the pipe. A peak flow water velocity of 5 ft/sec shall be used in the hydraulics engineering design. Pipe shall be blue in color or contain blue striping. Pipe shall be stored and handled as per the manufacture's recommendations. Coiled pipe will not be allowed.

Mechanical Joint Adapters to Ductile Iron. Mechanical Joint (MJ) Adapters shall be PE 4710 HDPE, minimum cell classification of 445474C as determined by ASTM D 3350. MJ adapters shall have a pressure rating equal to the pipe unless otherwise specified on the plans. The adaptors shall be designed to be fused to the HDPE pipe and restrained to the Ductile Iron MJ hub. The MJ adapter shall be provided with a stainless-steel stiffener insert.

Joining HDPE Pipe Sections. Sections of HDPE pipe shall be joined into continuous lengths on the jobsite above ground. The joining method shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. The butt fusion equipment used in the joining procedures should be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, temperature requirements of 400-450 degrees Fahrenheit, alignment, and an interfacial fusion pressure of 75 PSI. The butt fusion joining will produce a joint with weld strength equal to or greater than the tensile strength of the pipe itself. All welds will be made using a Data Logger to record temperature and fusion pressure. A graphic representation of the fusion cycle shall be part of the Quality Control record. All connection methods and processes shall be to the approval of the Engineer. Socket fusion, hot gas fusion, threading, solvents, and epoxies will not be allowed to join HDPE pipe.

Tracer Wire for HDPE Pipe. Contractor shall provide a continuous length of blue #12 THHN or larger tracer wire with all non-ferrous piping. Wire will not be considered approved until a continuity test has been performed.

At all connections at tees, crosses and locations where the tracer wire will be brought to the surface, a direct bury lug shall be provided. Termination boxes with blue marker posts shall be provided if the tracer wire is not extended to a vault, valve box, or hydrant. When used, the marker post will be approximately 4.5 feet high and labeled to mark the water main and termination box location. The termination box and marker post shall be approved by the engineer.

All excavation under and within two (2) feet of any pavement, curb and gutter or sidewalk shall be backfilled with trench backfill.

The time and procedure for the flushing of new water mains shall be approved by the City's Water Distribution Supervisor and the Engineer to ensure any special water distribution system considerations are addressed.

Hydrostatic tests will be performed according to Section 13 of the American Water Works Association Specifications, Designation: AWWA C600 and as may be amended by the City of Decatur. The water main will be subjected to the hydrostatic pressure and leakage tests specified by the water main owner. Water of satisfactory bacteriological quality for drinking purposes for making the hydrostatic and leakage tests will be provided by the City of Decatur at no expense to the Contractor.

Testing and disinfecting water mains shall be in accordance with the City of Decatur Standard Specification for Water Main Construction.

Dewatering, if required, shall be considered included in the cost of the contract.

Contractor shall submit such product literature and catalog cuts of materials to be supplied to relate these materials to the specification.

Contractor shall be responsible for recording depth and location of all water main and appurtenances constructed. Contractor shall provide the Owner with one set of (minimum) 11-inch by 17-inch drawings indicating information requested herein. Information shall be hand drawn and legible.

Contractor shall submit all test certifications for project closeout.

Water mains and water service lines shall be protected against entrance of hydrocarbons through diffusion through any material used in construction of the line.

Water mains shall be laid at least 10 feet horizontally from any existing or proposed gravity sanitary or storm sewer, septic tank, or subsoil treatment system. The distance shall be measured edge to edge. Water mains may be laid closer than ten feet (10') to sewer line when local conditions prevent a lateral separation of ten feet, the water main invert is at least eighteen inches (18") above the crown of the sewer, or the water main is either in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the gravity sewer. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

Water mains crossing sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer with preference to the water main located above the sewer.

At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required.

Where conditions exist that the minimum vertical and horizontal separation cannot be maintained, or it is necessary for the water main to pass under a sewer or drain, the sewer shall be constructed of STORM SEWER, (WATER MAIN QUALITY PIPE) that extends at least ten feet (10'), measured normally to the pipe.

Proper and suitable tools and appliances for the safe and convenient handling and laying of the pipe and fittings shall be used. Great care shall be taken to prevent the pipe from being damaged, particularly on the inside of the pipes and fittings. All pieces shall be carefully examined for defects and no piece shall be laid which is known to be defective. If any defective piece should be discovered after having been laid, it shall be removed and replaced with a sound one by the Contractor at his/her own expense. The interior of the pipe and fittings shall be thoroughly cleaned and, when laid, shall conform accurately to the lines and grades or depth of cover below established grade.

Water mains shall have a minimum of 42 inches of cover. Where located under Riprap the 42 inches of cover shall be measured from the bottom of the riprap bedding material. Bedding material and haunching material shall extend to one foot (1') above the main. All open trenches shall be backfilled by the end of the day. The Contractor shall limit the amount excavated to the length of pipe that can be laid in the same day or the amount of acceptable trench backfill material available.

This work shall be measured per linear FOOT for water main installed of the size specified. The length will include retainer glands, couplings and granular bedding materials. Trench backfill used while installing the proposed water main will be measured separately as TRENCH BACKFILL. Connections to existing water main will be measured separately as CONNECTION TO EXISTING WATER MAIN.

This work shall be paid for at the contract unit price per linear FOOT for WATER MAIN, of the size specified. This price shall include the HDD drilling and excavation of the trench, removal of surplus material, trench shoring and dewatering, installation of water main pipe, all pipe fittings not listed as a separate pay item, mechanical joint retainer glands, joint materials, bedding six inches (6") below the pipe, granular backfill to the level of one foot (1') above the top of the pipe, copper locator wire, testing and disinfecting of the water main, and other work necessary to complete this item. Trench backfill used while installing the proposed water main will be paid for separately as TRENCH BACKFILL. Connections to existing water main will be paid for separately as CONNECTION TO EXISTING WATER MAIN.

VALVE BOX

Valve boxes shall be Tyler 664- S, 3-piece, screw type with 5-1/4" shaft and no-tilt drop cover marked with the legend "WATER" and installed with a rubber stabilizer. Water main connection shall be coordinated so valve box is located so outside the wheel line of the pavement.

Valve boxes shall be paid for at the contract unit price bid per EACH for VALVE BOX of the diameter and type specified.

STORM SEWER, (WATER MAIN QUALITY PIPE)

This work consists of constructing storm sewer to meet water main standards, as required by the IEPA or when otherwise specified. In addition to this special provision, this work shall be performed in accordance with applicable parts of Section 550 of the Standard Specifications, applicable sections of the current edition of the IEPA Regulations (Title 35 of the Illinois Administrative Code, Subtitle F, Chapter II, Section 653.119), the applicable sections of the current edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and as herein specified.

This provision shall govern the installation of all storm sewers which do not meet IEPA criteria for separation distance between storm sewers and water mains. Separation criteria for storm sewers placed adjacent to water mains and water service lines are as follows:

(1) Water mains and water service lines shall be located at least 10 feet (3.05 meters) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, or sewer service connections.

(2) Water mains and water service lines may be located closer than 10 feet (3.05 meters) to a sewer line when:

Local conditions prevent a lateral separation of 10 feet (3.05 meters); and

The water main or water service invert is 18 inches (460 mm) above the crown of the sewer; and

The water main or water service is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

(3) A water main or water service shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains or services cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main or water services located within 10 feet (3.05 meters) horizontally of any sewer or drain crossed.

When it is impossible to meet (1), (2) or (3) above, the storm sewer shall be constructed of concrete pressure pipe, slip-on or mechanical joints ductile iron pipe, or PVC pipe equivalent to water main standards of construction. Construction shall extend on each side of the crossing until the perpendicular distance from the water main or water service to the sewer or drain line is at least 10 feet (3.05 meters). Storm sewer meeting water main requirements shall be constructed of the following pipe materials:

Concrete Pressure Pipe

Concrete pressure pipe shall conform to the latest ANSI/AWWA C300, C301, C302, or C303.

Joints shall conform to Article 41-2.07B of the "Standard Specifications for Water and Sewer Main Construction in Illinois."

Ductile Iron Pipe

Ductile Iron pipe shall conform to ANSI A 21.51 (AWWA C151), class or thickness designed per ANSI A 21.50 (AWWA C150), tar (seal) coated and/or cement lined per ANSI A 21.4 (AWWA C104), with a mechanical or rubber ring (slip seal or push on) joints.

Joints for ductile iron pipe shall be in accordance with the following applicable specifications.

- | | | | |
|----|-------------------|---|--------------------|
| 1. | Mechanical Joints | - | AWWA C111 and C600 |
| 2. | Push-On Joints | - | AWWA C111 and C600 |

Plastic Pipe

Plastic pipe shall be marked with the manufacturer's name (or trademark); ASTM or AWWA specification; Schedule Number, Dimension Ratio (DR) Number or Standard Dimension Ratio (SDR) Number; and Cell Class. The pipe and fittings shall also meet NSF Standard 14 and bear the NSF seal of approval. Fittings shall be compatible with the type of pipe used. The plastic pipe options shall be in accordance with the following:

Polyvinyl Chloride (PVC) conforming to ASTM Standard D 1785. Schedule 80 is the minimum required for all pipe sizes, except when the pipe is to be threaded, and then it shall be Schedule 120. It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Polyvinyl Chloride (PVC) conforming to ASTM D 2241. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 441. A minimum of Schedule 80 is required for all pipe sizes. Threaded joints are not allowed. It shall be made from CPVC compound meeting ASTM D 1784, Class 23447.

Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 442. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from CPVC compound meeting ASTM D 1784. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C900. A minimum of wall thickness of DR 25 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C905. A minimum of wall thickness of DR 26 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Joining of plastic pipe shall be by push-on joint, solvent welded joint, heat welded joint, flanged joint, or threaded joint, in accordance with the pipe manufacturer's instructions and industry standards. Special precautions shall be taken to insure clean, dry contact surfaces when making solvent or heat welded joints. Adequate setting time shall be allowed for maximum strength.

Elastomeric seals (gaskets) used for push-on joints shall comply with ASTM F477.

Solvent cement shall be specific for the plastic pipe material and shall comply with ASTM D 2564 (PVC) or ASTM F 493 (CPVC) and be approved by NSF.

This work shall be measured and paid for at the contract unit price per linear FOOT for STORM SEWER (WATER MAIN QUALITY PIPE) of the size and type specified.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ROCK ISLAND DISTRICT
PO BOX 2004 CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61204-2004

April 30, 2019

Operations Division

SUBJECT: CEMVR-OD-P-2019-322

City of Decatur
Attn: Paul Caswell
1 Gary K. Anderson Plaza
Decatur, Illinois 62523

Dear Mr. Caswell:

Our office has reviewed your application received March 8, 2019 concerning the bridge replacement, carrying Taylor Road (FAU 7426) over Ward Branch, located in Section 28, Township 16 North, Range 2 East, Macon County, Illinois.

Your project is covered under Nationwide Permit No. 14, as published in the enclosed Fact Sheet No. 8 (IL), provided you meet the permit conditions for the nationwide permits, which are included in the Fact Sheet. The Corps has also made a determination of no effect on federally threatened and endangered species or critical habitat. The Illinois Environmental Protection Agency (IEPA) has also issued Section 401 Water Quality Certification with conditions for this nationwide permit. Please note these additional conditions included in the Fact Sheet. The decision regarding this action is based on information found in the administrative record, which documents the District's decision-making process, the basis for the decision, and the final decision.

This verification is valid until March 18, 2022, unless the nationwide permit is modified, reissued, or revoked. It is your responsibility to remain informed of changes to the nationwide permit program. We will issue a public notice announcing any changes if and when they occur. Furthermore, if you commence or are under contract to commence this activity before the date the nationwide permit is modified or revoked, you will have twelve months from that date to complete your activity under the present terms and conditions of this nationwide permit. If your project plans change, you should contact our office for another determination.

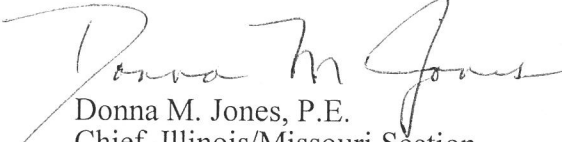
This authorization does not eliminate the requirement that you must still acquire other applicable Federal, state, and local permits. If you have not already coordinated your project with the Illinois Department of Natural Resources – Offices of Water Resources, please contact them at 217/782-3863 to determine if a floodplain development permit is required for your project. You may contact the IEPA Facility Evaluation Unit at 217/782-3362 to determine whether additional authorizations are required from the IEPA. Please send any electronic correspondence to Epa.401.docs@illinois.gov.

You are required to complete and return the enclosed "Completed Work Certification" form upon completion of your project in accordance with General Condition No. 30 of the nationwide permits.

The Rock Island District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the attached postcard and return it or go to our Customer Service Survey found on our website at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey (Be sure to select "Rock Island District" under the area entitled: Which Corps office did you deal with?)

Should you have any questions, please contact our Regulatory Branch by letter, or telephone Mrs. Jackie M. Groves at 309/794-5351 or email me at Jackie.m.groves@usace.army.mil.

Sincerely,


Donna M. Jones, P.E.
Chief, Illinois/Missouri Section
Regulatory Branch

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s), of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

Transferee

Date

Enclosures

Copy Furnished: (w/o enclosures)

Mr. William Milner, P.E.
Section Chief - Downstate Regulatory Programs
Illinois Department of Natural Resources
Office of Water Resources
1 Natural Resources Way
Springfield, IL 62702
bill.milner@illinois.gov (email copy)

Mr. Darin LeCrone, P.E.
Illinois Environmental Protection Agency
Division of Water Pollution Control, Sect. 15
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
Darin.LeCrone@illinois.gov (email)

WHKS & Co.
Attn: Cory Chamberlain
3695 6th St., Frontage Road West
Suite A
Springfield, IL 62711

COMPLETED WORK CERTIFICATION

Permit Number: CEMVR-OD-P-2019-322
Name of Permittee: City of Decatur
Date of Issuance: April 30, 2019
County/State: Macon/Illinois

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Engineer District,
Rock Island
ATTN: Regulatory Branch
Clock Tower Building
Post Office Box 2004
Rock Island, Illinois 61204-2004

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above reference permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

JMG



FACT SHEET NO. 8(IL)

US Army Corps
of Engineers
Rock Island District

NATIONWIDE PERMITS IN ILLINOIS

EFFECTIVE DATE: MARCH 19, 2017

On January 6, 2017, the Corps of Engineers published in the Federal Register (82 FR 1860), the Final Rule for the Nationwide Permits Program under the Rivers and Harbors Act of 1899; the Clean Water Act; and the Marine Protection, Research and Sanctuaries Act. These Nationwide Permits became effective on March 19, 2017.

The Nationwide Permit Program is an integral part of the Corps' Regulatory Program. The Nationwide Permits are a form of general permits issued by the Chief of Engineers and are intended to apply throughout the entire United States and its territories. A listing of the nationwide permits and general conditions is included herein. We encourage prospective permit applicants to consider the advantages of nationwide permit authorization during the preliminary design of their projects. Assistance and further information regarding all aspects of the Corps of Engineers Regulatory Program may be obtained by contacting the appropriate Corps of Engineers District at the address and/or telephone number listed on the last page of this Fact Sheet.

To ensure projects authorized by a Nationwide Permit will result in minimal adverse effects to the aquatic environment, the following **Regional Conditions** were developed for projects proposed **within the state of Illinois (See NOTE regarding the Chicago District)**:

1. Stormwater management facilities shall not be located within a stream, except for NWP 21, 44, 49, or 50.
2. For newly constructed channels through areas that are unvegetated, native grass filter strips, or a riparian buffer with native trees or shrubs, a minimum of 25 feet wide from the top of bank must be planted along both sides of the new channel. A survival rate of 80 percent of desirable native species with aerial coverage of at least 50 percent shall be achieved within 3 years of establishment of the buffer strip.
3. Side slopes of a newly constructed channel will be no steeper than 2:1 and planted to permanent, perennial, native vegetation if not armored.
4. For a single family residence authorized under Nationwide Permit No. 29, the permanent loss of waters of the United States (including jurisdictional wetlands) must not exceed 1/4 acre.
5. For NWP 46, the discharge of dredged or fill material into ditches and canals that would sever the jurisdiction of an upstream water of the United States from a downstream water of the United States is not allowed.
6. For NWP 52, no project will be authorized within Lake Michigan. An individual permit will be required.
7. Any bank stabilization activity involving a method that protrudes from the bank contours, such as jetties, stream barbs, and/or weirs, will require a pre-construction notification in accordance with General Condition 32.
8. Mitigation shall be constructed prior to, or concurrent with, the discharge of dredged or fill material into waters of the United States unless an alternate timeline is specifically approved in the authorization.
9. Operation of heavy equipment within the stream channel should be avoided. If in-stream work is unavoidable, it shall be performed in such a manner as to minimize the duration of the disturbance, turbidity increases, substrate disturbance, bank disturbance, and disturbance to riparian vegetation. This condition does not further restrict otherwise authorized drainage ditch maintenance activities.

NOTE: The Chicago District has suspended many of the Nationwide Permits and established regional permits for work in McHenry, Kane, Lake, DuPage, Will and Cook Counties in Illinois. Information regarding Chicago District requirements can be accessed through their website at <http://www.lrc.usace.army.mil/Missions/Regulatory.aspx>. If you have any questions regarding the Chicago District program, please contact the Regulatory Office by telephone at 312/846-5530, or e-mail lrcregweb@usace.army.mil.

Permits, issued by the Corps of Engineers, under the authority of Section 404 of the Clean Water Act may not be issued until the state (where the discharge will occur) certifies, under Section 401 of the Act, that the discharge will comply with the water quality standards of the State. On February 27, 2017, the Illinois Environmental Protection Agency (IEPA) issued their final Section 401 Water Quality Certification decision.

DENIED NATIONWIDE PERMITS

The IEPA did not issue a generic water quality certification for the following nationwide permits which are listed by subject only:

21. Surface Coal Mining Activities
23. Approved Categorical Exclusions
31. Maintenance of Existing Flood Control Facilities
34. Cranberry Production Activities
37. Emergency Watershed Protection and Rehabilitation
48. Commercial Shellfish Aquaculture Activities
49. Coal Remining Activities
50. Underground Coal Mining Activities

Since Nationwide Permits 21, 23, 31, 37, 48, 49, and 50 are applicable under both Section 10 and 404, the State Section 401 certification is only required for discharges of pollutants under these nationwide permits. Section 10 work not involving discharges of dredged or fill material continues to be authorized under these nationwide permits.

Authorization for discharges covered by all the above nationwide permits is denied without prejudice. Applicants wishing to conduct such discharges must first obtain either an individual water quality certification or waiver from:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

If the state certifying agency fails to act on an application for water quality certification within 60 days after receipt, the certification requirement is presumed to be waived. The applicant must furnish the District Engineer (at the appropriate address listed on the last page of the Fact Sheet) with a copy of the certification or proof of waiver. The discharge may proceed upon receipt of the District Engineer's determination that the discharge qualifies for authorization under this nationwide permit. Details of this procedure are contained in 33 CFR 330.4, a copy of which is available upon request.

Under certain circumstances, Nationwide Permits 3, 7, 8, 12, 13, 14, 17, 18, 21, 22, 23, 27, 29, 31, 33, 34, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 48, 49, 50, 51, 52, 53 and 54 require that the permittee notify the District Engineer at least 45 days prior to performing the discharge under certain circumstances. Specific instructions for these notifications are contained in General condition 32, a copy of which is included.

For all other Nationwide Permits, the IEPA issued Section 401 Water Quality Certification with conditions. General Conditions 1, 2, and 3 apply to all nationwide permits for which certification was not denied and activities require authorization under Section 404 of the Clean Water Act. Other conditions specific to a Nationwide Permit are listed at the end of the subject nationwide permit.

General Condition 1: An individual 401 water quality certification will be required for any activities permitted under these Nationwide Permits for discharges to waters designated by the State of Illinois as Outstanding Resource Waters under 35 Ill. Adm. Code 302.105(b).

General Condition 2: Projects requiring authorization under Section 404 of the Clean Water Act must implement Best Management Practices (BMPs) to protect water quality, preserve natural hydrology and minimize the overall impacts to aquatic resources during and after construction. Projects that include a discharge of pollutants to waters that have impaired water quality according to the Illinois Environmental Protection Agency's Section 303(d) list or for which there is an approved Total Maximum Daily Load (TMDL) allocation for any parameter, additional planning will be necessary to ensure that no further degradation of water quality will occur. The TMDL program information and the Agency's 303(d) list of impaired waters are available at <http://www.epa.illinois.gov/topics/water-quality/watershed-management/tmdls/index>. For waters that include an approved TMDL the applicant shall incorporate into their plans and BMPs any measures that ensure consistency with the assumptions and requirements of the TMDL within any timeframes established in the TMDL. The applicant must carefully document the justifications for all plans and BMPs, and install, implement and maintain BMPs that are consistent with all relevant pollutant load allocations and conditions in the TMDL implementation plan. If a TMDL has not yet been approved to address water quality impairments that are documented in the Agency's 303(d)

General Condition 3: Prior to proceeding with any work in accordance with any Nationwide Permit, potential impacts to threatened or endangered species shall be identified through use of the State's Ecological Compliance Assessment Tool (EcoCAT) at <http://dnrecocat.state.il.us/ecopublic/>. If potential impacts to State threatened or endangered species are identified, the Illinois Department of Natural Resources shall be consulted with.

Nationwide Permits and Conditions

The following is a list of the nationwide permits, authorized by the Chief of Engineers, and published in the Federal Register (82 FR 1860). Permittees wishing to conduct activities under the nationwide permits must comply with the conditions published in Section C. The Nationwide

Permit General Conditions found in Section C have been reprinted at the end of this Fact Sheet. The parenthetical references (Section 10, Section 404) following each nationwide permit indicate the specific authorities under which that permit is issued.

B. Nationwide Permits

1. Aids to Navigation. The placement of aids to navigation and regulatory markers that are approved by and installed in accordance with the requirements of the U.S. Coast Guard (see 33 CFR, chapter I, subchapter C, part 66). (Authority: Section 10 of the Rivers and Harbors Act of 1899 (Section 10))

2. Structures in Artificial Canals. Structures constructed in artificial canals within principally residential developments where the connection of the canal to a navigable water of the United States has been previously authorized (see 33 CFR 322.5(g)). (Authority: Section 10)

3. Maintenance. (a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After conducting the maintenance activity, temporary fills must be removed in their entirety and the affected areas returned to Pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Authorities: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (Sections 10 and 404))

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 3. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 3 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, as determined by the Illinois EPA.

3. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. The applicant for Nationwide Permit 3 shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
5. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant for Nationwide Permit 3 shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant for Nationwide Permit 3 shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
6. The applicant for Nationwide 3 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
7. Temporary work pads, cofferdams, access roads and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities.
8. The applicant for Nationwide 3 that uses temporary work pads, cofferdams, access roads and other temporary fills in order to perform work in creeks, streams, or rivers shall maintain flow in these waters by utilizing dam and pumping, fluming, culverts or other such techniques.

4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities. Fish and wildlife harvesting devices and activities such as pound nets, crab traps, crab dredging, eel pots, lobster traps, duck blinds, and clam and oyster digging, fish aggregating devices, and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This NWP does not authorize artificial reefs or impoundments and semi-impoundments of waters of the United States for the culture or holding of motile species such as lobster, or the use of covered oyster trays or clam racks. (Authorities: Sections 10 and 404)

5. Scientific Measurement Devices. Devices, whose purpose is to measure and record scientific data, such as staff gages, tide and current gages, meteorological stations, water recording and biological observation devices, water quality testing and improvement devices, and similar structures. Small weirs and flumes constructed primarily to record water quantity and velocity are also authorized provided the discharge is limited to 25 cubic yards. Upon completion of the use of the device to measure and record scientific data, the measuring device and any other structures or fills associated with that device (e.g., foundations, anchors, buoys, lines, etc.) must be removed to the maximum extent practicable and the site restored to pre-construction elevations. (Authorities: Sections 10 and 404)

6. Survey Activities. Survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, sample plots or transects for wetland delineations, and historic resources surveys. For the purposes of this NWP, the term "exploratory trenching" means mechanical land clearing of the upper soil profile to expose bedrock or substrate, for the purpose of mapping or sampling the exposed material. The area in which the exploratory trench is dug must be restored to its pre-construction elevation upon completion of the work and must not drain a water of the United States. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. This NWP authorizes the construction of temporary pads, provided the discharge does not exceed 1/10-acre in waters of the U.S. Discharges and structures associated with the recovery of historic resources are not authorized by this NWP. Drilling and the discharge of excavated material from test wells for oil and gas exploration are not authorized by this NWP; the plugging of such wells is authorized. Fill placed for roads and other similar activities is not authorized by this NWP. The NWP does not authorize any permanent structures. The discharge of drilling mud and cuttings may require a permit under section 402 of the Clean Water Act. (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 6. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 6 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 6 shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
3. Material resulting from trench excavation within surface waters of the State may be temporarily sidecast adjacent to the trench excavation provided that:
 - A. Sidecast material is not placed within a creek, stream, river or other flowing water body such that material dispersion could occur;

- B. Sidecast material is not placed within ponds or other water bodies other than wetlands; and
- C. Sidecast material is not placed within a wetland for a period longer than twenty (20) calendar days. Such sidecast material shall either be removed from the site, or used as backfill (refer to Condition 4 and 5).
4. Backfill used within trenches passing through surface water of the State, except wetland areas, shall be clean coarse aggregate, gravel or other material which will not cause siltation. Excavated material may be used only if:
- A. Particle size analysis is conducted and demonstrates the material to be at least 80% sand or larger size material, using a #230 U.S. sieve; or
- B. Excavation and backfilling are done under dry conditions.
5. Backfill used within trenches passing through wetland areas shall consist of clean material which will not cause siltation. Excavated material shall be used to the extent practicable, with the upper six (6) to twelve (12) inches backfilled with the topsoil obtained during trench excavation.
6. Temporary work pads shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities.
7. The applicant for Nationwide Permit 6 that uses temporary work pads in order to perform work in creeks, streams, or rivers shall maintain flow in these waters by utilizing dam and pumping, fluming, culverts or other such techniques.

7. Outfall Structures and Associated Intake Structures. Activities related to the construction or modification of outfall structures and associated intake structures, where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted by, or otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (section 402 of the Clean Water Act). The construction of intake structures is not authorized by this NWP, unless they are directly associated with an authorized outfall structure

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.)
(Authorities: Sections 10 and 404)

8. Oil and Gas Structures on the Outer Continental Shelf. Structures for the exploration, production, and transportation of oil, gas, and minerals on the outer continental shelf within areas leased for such purposes by the Department of the Interior, Bureau of Ocean Energy Management. Such structures shall not be placed within the limits of any designated shipping safety fairway or traffic separation scheme, except temporary anchors that comply with the fairway regulations in 33 CFR 322.5(l). The district engineer will review such proposals to ensure compliance with the provisions of the fairway regulations in 33 CFR 322.5(l). Any Corps review under this NWP will be limited to the effects on navigation and national security in accordance with 33 CFR 322.5(f), as well as 33 CFR 322.5(l) and 33 CFR part 334. Such structures will not be placed in established danger zones or restricted areas as designated in 33 CFR part 334, nor will such structures be permitted in EPA or Corps-designated dredged material disposal areas.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 10)

9. Structures in Fleeting and Anchorage Areas. Structures, buoys, floats, and other devices placed within anchorage or fleeting areas to facilitate moorage of vessels where such areas have been established for that purpose. (Authority: Section 10)

10. Mooring Buoys. Non-commercial, single-boat, mooring buoys. (Authority: Section 10)

11. Temporary Recreational Structures. Temporary buoys, markers, small floating docks, and similar structures placed for recreational use during specific events such as water skiing competitions and boat races or seasonal use, provided that such structures are removed within 30 days after use has been discontinued. At Corps of Engineers reservoirs, the reservoir managers must approve each buoy or marker individually. (Authority: Section 10)

12. Utility Line Activities. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project. Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area. Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any

exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities. Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR part 322). Overhead utility lines constructed over Section 10 waters and utility lines that are routed in or under Section 10 waters without a discharge of dredged or fill material require a Section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) The activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a Section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed or installed in navigable waters of the United States (i.e., Section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Utility lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 5: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a Section 404 permit (see NWP 15).

Note 6: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act Section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 7: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

Note 8: For NWP 12 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 12. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 12 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. Case-specific water quality certification from the Illinois EPA will be required for:
 - A. activities in the following waters:
 - i. Lake Calumet
 - ii. Fox River (including the Fox Chain of Lakes)
 - iii. Lake Michigan
 - iv. Chicago Sanitary and Ship Canal
 - v. Calumet-Sag Channel
 - vi. Little Calumet River
 - vii. Grand Calumet River
 - viii. Calumet River
 - ix. Pettibone Creek (in Lake County)
 - x. South Branch of the Chicago River (including the South Fork)
 - xi. North Branch of the Chicago River (including the East and West Forks and the Skokie Lagoons)
 - xii. Chicago River (Main Stem)
 - xiii. Des Plaines River
 - xiv. Kankakee
 - xv. All Public and Food Processing Water Supplies with surface intake facilities. The Illinois EPA's Division of Public Water Supply at 217/782-1020 may be contacted for information on these water supplies.
 - B. activities in the following waters if material is sidecast into waters of the State or wetlands:
 - i. Saline River (in Hardin County)
 - ii. Richland Creek (in St. Clair and Monroe Counties)
 - iii. Rock River (in Winnebago County)
 - iv. Illinois River upstream of mile 229.6 (Illinois Route 178 bridge)
 - v. Illinois River between mile 140.0 and 182.0
 - vi. DuPage River (including the East and West Branches)
 - vii. Salt Creek (Des Plaines River Watershed)
 - viii. Waukegan River (including the South Branch)
2. Section 401 water quality certification is hereby issued for all other waters, with the following conditions:
 - A. The applicant for Nationwide Permit 12 shall not cause:
 - i. violation of applicable provisions of the Illinois Environmental Protection Act;
 - ii. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - iii. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - iv. interference with water use practices near public recreation areas or water supply intakes.
 - B. The applicant for Nationwide Permit 12 shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
 - C. Material resulting from trench excavation within surface waters of the State may be temporarily sidecast adjacent to the trench excavation provided that:
 - i. Sidecast material is not placed within a creek, stream, river or other flowing water body such that material dispersion could occur;
 - ii. Side cast material is not placed within ponds or other water bodies other than wetlands; and
 - iii. Sidecast material is not placed within a wetland for a period longer than twenty (20) calendar days. Such sidecast material shall either be removed from the site (refer to Condition 2.F), or used as backfill (refer to Condition 2.D and 2.E).
 - D. Backfill used within trenches passing through surface water of the State, except wetland areas, shall be clean course aggregate, gravel or other material which will not cause siltation, pipe damage during placement, or chemical corrosion in place. Excavated material may be used only if:
 - i. Particle size analysis is conducted and demonstrates the material to be at least 80% sand or larger size material, using a #230 U.S. sieve; or
 - ii. Excavation and backfilling are done under dry conditions.
 - E. Backfill used within trenches passing through wetland areas shall consist of clean material which will not cause siltation, pipe damage during placement, or chemical corrosion in place. Excavated material shall be used to the extent practicable, with the upper six (6) to twelve (12) inches backfilled with the topsoil obtained during trench excavation.

- F. All material excavated which is not being used as backfill as stipulated in Condition 2.D and 2.E shall be stored or disposed in self-contained areas with no discharge to waters of the State. Material shall be disposed of appropriately under the regulations at 35 Ill. Adm. Code Subtitle G.
- G. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant for Nationwide Permit 12 shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant for Nationwide Permit 12 shall be responsible for obtaining an NPDES Storm Water Permit required by the federal Clean Water Act prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
- H. The applicant for Nationwide Permit 12 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
- I. The use of directional drilling to install utility pipelines below surface waters of the State is hereby certified provided that:
 - i. All pits and other construction necessary for the directional drilling process are located outside of surface waters of the State;
 - ii. All drilling fluids shall be adequately contained such that they cannot cause a discharge to surface waters of the State. Such fluids shall be treated as stipulated in Condition 2.F; and
 - iii. Erosion and sediment control is provided in accordance with Conditions 2.B, 2.G, and 2.H.
- J. Temporary work pads, cofferdams, access roads and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Material excavated or dredged from the surface water or wetland shall not be used to construct the temporary facility. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities.
- K. The applicant for Nationwide Permit 12 that uses temporary work pads, cofferdams, access roads or other temporary fills in order to perform work in creeks, streams, or rivers for construction activities shall maintain flow in the these waters during such construction activity by utilizing dam and pumping, fluming, culverts or other such techniques.
- L. Permanent access roads shall be constructed of clean coarse aggregate or non-erodible nonearthen fill material that will not cause siltation. Material excavated or dredged from the surface water or wetland shall not be used to construct the access road in waters of the state. The applicant for Nationwide Permit 12 that constructs access roads shall maintain flow in creeks, streams and rivers by installing culverts, bridges or other such techniques.

13. Bank Stabilization. Bank stabilization activities necessary for erosion control or prevention, such as vegetative stabilization, bioengineering, sills, rip rap, revetment, gabion baskets, stream barbs, and bulkheads, or combinations of bank stabilization techniques, provided the activity meets all of the following criteria:

- (a) No material is placed in excess of the minimum needed for erosion protection;
- (b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects (an exception is for bulkheads—the district engineer cannot issue a waiver for a bulkhead that is greater than 1,000 feet in length along the bank);
- (c) The activity will not exceed an average of one cubic yard per running foot, as measured along the length of the treated bank, below the plane of the ordinary high water mark or the high tide line, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;
- (d) The activity does not involve discharges of dredged or fill material into special aquatic sites, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;
- (e) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the United States;
- (f) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas);
- (g) Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization;
- (h) The activity is not a stream channelization activity; and
- (i) The activity must be properly maintained, which may require repairing it after severe storms or erosion events. This NWP authorizes those maintenance and repair activities if they require authorization. This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the bank stabilization activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high

flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to Pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Invasive plant species shall not be used for bioengineering or vegetative bank stabilization.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the bank stabilization activity: (1) Involves discharges into special aquatic sites; or (2) is in excess of 500 feet in length; or (3) will involve the discharge of greater than an average of one cubic yard per running foot as measured along the length of the treated bank, below the plane of the ordinary high water mark or the high tide line. (See general condition 32.) (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 13. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 13 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The bank stabilization activities shall not exceed 1000 linear feet.
2. Asphalt, bituminous material and concrete with protruding material such as reinforcing bars or mesh shall not be:
 - A. used for backfill;
 - B. placed on shorelines/streambanks; or
 - C. placed in waters of the State.
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, as determined by the Illinois EPA.
4. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
5. The applicant shall consider installing bioengineering practices in lieu of structural practices of bank stabilization to minimize impacts to the lake, pond, river or stream and enhance aquatic habitat. The applicant shall document the selection process for the bank stabilization technique(s) and the basis for the selection of the bank stabilization practices. Bioengineering techniques may include, but are not limited to:
 - A. adequately sized riprap or A-Jack structures keyed into the toe of the slope with native plantings on the banks above;
 - B. vegetated geogrids;
 - C. coconut fiber (coir) logs;
 - D. live, woody vegetative cuttings, fascines or stumps;
 - E. brush layering; and
 - F. soil lifts.

14. Linear Transportation Projects. Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to Pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 14. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 14 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The affected area of the stream channel shall not exceed 300 linear feet, as measured along the stream corridor.
2. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, as determined by the Illinois EPA.
3. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
5. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
6. The applicant for Nationwide Permit 14 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
7. Temporary work pads, cofferdams, access roads and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities.
8. The applicant for Nationwide Permit 14 that uses temporary work pads, cofferdams, access roads and other temporary fills in order to perform work in creeks, streams, or rivers shall maintain flow in these waters by utilizing dam and pumping, fluming, culverts or other such techniques.

15. U.S. Coast Guard Approved Bridges. Discharges of dredged or fill material incidental to the construction of a bridge across navigable waters of the United States, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills, provided the construction of the bridge structure has been authorized by the U.S. Coast Guard under Section 9 of the Rivers and Harbors Act of 1899 or other applicable laws. Causeways and approach fills are not included in this NWP and will require a separate Section 404 permit. (Authority: Section 404 of the Clean Water Act (Section 404))

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 15. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 15 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2011).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

16. Return Water From Upland Contained Disposal Areas. Return water from an upland contained dredged material disposal area. The return water from a contained disposal area is administratively defined as a discharge of dredged material by 33 CFR 323.2(d), even though the disposal itself occurs in an area that has no waters of the United States and does not require a

section 404 permit. This NWP satisfies the technical requirement for a section 404 permit for the return water where the quality of the return water is controlled by the state through the section 401 certification procedures. The dredging activity may require a section 404 permit (33 CFR 323.2(d)), and will require a Section 10 permit if located in navigable waters of the United States. (Authority: Section 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 16. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 16 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. Applicants shall obtain a Subtitle C State Construction and Operating Permit for construction and operation of any dredge material disposal facility or upland contained disposal facility.
2. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
3. The applicant for Nationwide Permit 16 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
4. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.

17. Hydropower Projects. Discharges of dredged or fill material associated with hydropower projects having: (a) Less than 5000 kW of total generating capacity at existing reservoirs, where the project, including the fill, is licensed by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act of 1920, as amended; or (b) a licensing exemption granted by the FERC pursuant to section 408 of the Energy Security Act of 1980 (16 U.S.C. 2705 and 2708) and section 30 of the Federal Power Act, as amended.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 17. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 17 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 17 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. An individual Section 401 water quality certification will be required for any project that is not previously approved by a Section 401 water quality certification issued by the Illinois EPA for a Federal Energy Regulatory Commission license or permit.

18. Minor Discharges. Minor discharges of dredged or fill material into all waters of the United States, provided the activity meets all of the following criteria:

- (a) The quantity of discharged material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line;
- (b) The discharge will not cause the loss of more than 1/10-acre of waters of the United States; and
- (c) The discharge is not placed for the purpose of a stream diversion.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The discharge or the volume of area excavated exceeds 10 cubic yards below the plane of the ordinary high water mark or the high tide line, or (2) the discharge is in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 18. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 18 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;

- B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
 3. The applicant for Nationwide Permit 18 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).

19. Minor Dredging. Dredging of no more than 25 cubic yards below the plane of the ordinary high water mark or the mean high water mark from navigable waters of the United States (i.e., Section 10 waters). This NWP does not authorize the dredging or degradation through siltation of coral reefs, sites that support submerged aquatic vegetation (including sites where submerged aquatic vegetation is documented to exist but may not be present in a given year), anadromous fish spawning areas, or wetlands, or the connection of canals or other artificial waterways to navigable waters of the United States (see 33 CFR 322.5(g)). All dredged material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 19. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 19 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 19 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. Dredging shall be done by mechanical means and material shall not be discharged to Waters of the State.

20. Response Operations for Oil and Hazardous Substances. Activities conducted in response to a discharge or release of oil or hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR part 300) including containment, cleanup, and mitigation efforts, provided that the activities are done under either: (1) The Spill Control and Countermeasure Plan required by 40 CFR 112.3; (2) the direction or oversight of the federal on-scene coordinator designated by 40 CFR part 300; or (3) any approved existing state, regional or local contingency plan provided that the Regional Response Team (if one exists in the area) concurs with the proposed response efforts. This NWP also authorizes activities required for the cleanup of oil releases in waters of the United States from electrical equipment that are governed by EPA's polychlorinated biphenyl spill response regulations at 40 CFR part 761. This NWP also authorizes the use of temporary structures and fills in waters of the U.S. for spill response training exercises. (Authorities: Sections 10 and 404)

***** 21. Surface Coal Mining Activities.** Discharges of dredged or fill material into waters of the United States associated with surface coal mining and reclamation operations, provided the following criteria are met:

- (a) The activities are already authorized, or are currently being processed by states with approved programs under Title V of the Surface Mining Control and Reclamation Act of 1977 or as part of an integrated permit processing procedure by the Department of the Interior, Office of Surface Mining Reclamation and Enforcement;
- (b) The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal individual and cumulative adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into tidal waters or non-tidal wetlands adjacent to tidal waters; and
- (c) The discharge is not associated with the construction of valley fills. A 'valley fill' is a fill structure that is typically constructed within valleys associated with steep, mountainous terrain, associated with surface coal mining activities.

Notification: The permittee must submit a pre-construction notification to the district engineer and receive written authorization prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

22. Removal of Vessels. Temporary structures or minor discharges of dredged or fill material required for the removal of wrecked, abandoned, or disabled vessels, or the removal of man-made obstructions to navigation. This NWP does not authorize maintenance dredging, shoal removal, or riverbank snagging.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The vessel is listed or eligible for listing in the National Register of Historic Places; or (2) the activity is conducted in a special aquatic site, including coral reefs and wetlands. (See General Condition 32.) If condition 1 above is triggered, the permittee cannot commence the activity until informed by the district engineer that compliance with the "Historic Properties" general condition is completed. (Authorities: Sections 10 and 404)

Note 1: If a removed vessel is disposed of in waters of the United States, a permit from the U.S. EPA may be required (see 40 CFR 229.3). If a Department of the Army permit is required for vessel disposal in waters of the United States, separate authorization will be required.

Note 2: Compliance with general condition 18, Endangered Species, and general condition 20, Historic Properties, is required for all NWPs. The concern with historic properties is emphasized in the notification requirements for this NWP because of the possibility that shipwrecks may be historic properties.

***** 23. Approved Categorical Exclusions.** Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

- (a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 et seq.), that the activity is categorically excluded from the requirement to prepare an environmental impact statement or environmental assessment analysis, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and
- (b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP.

Notification: Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letters. (Authorities: Sections 10 and 404)

Note: The agency or department may submit an application for an activity believed to be categorically excluded to the Office of the Chief of Engineers (Attn: CECW-CO). Prior to approval for authorization under this NWP of any agency's activity, the Office of the Chief of Engineers will solicit public comment. As of the date of issuance of this NWP, agencies with approved categorical exclusions are: the Bureau of Reclamation, Federal Highway Administration, and U.S. Coast Guard. Activities approved for authorization under this NWP as of the date of this notice are found in Corps Regulatory Guidance Letter 05-07, which is available at: <http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-07.pdf>. Any future approved categorical exclusions will be announced in Regulatory Guidance Letters and posted on this same Web site.

24. Indian Tribe or State Administered Section 404 Programs. Any activity permitted by a state or Indian Tribe administering its own section 404 permit program pursuant to 33 U.S.C. 1344(g)-(1) is permitted pursuant to Section 10 of the Rivers and Harbors Act of 1899. (Authority: Section 10)

Note 1: As of the date of the promulgation of this NWP, only New Jersey and Michigan administer their own section 404 permit programs.

Note 2: Those activities that do not involve an Indian Tribe or State section 404 permit are not included in this NWP, but certain structures will be exempted by Section 154 of Public Law 94-587, 90 Stat. 2917 (33 U.S.C. 591) (see 33 CFR 322.4(b)).

25. Structural Discharges. Discharges of material such as concrete, sand, rock, etc., into tightly sealed forms or cells where the material will be used as a structural member for standard pile supported structures, such as bridges, transmission line footings, and walkways, or for general navigation, such as mooring cells, including the excavation of bottom material from within the form prior to the discharge of concrete, sand, rock, etc. This NWP does not authorize filled structural members that would support buildings, building pads, homes, house pads, parking areas, storage areas and other such structures. The structure itself may require a separate Section 10 permit if located in navigable waters of the United States. (Authority: Section 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 25. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 25 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:

- A. violation of applicable provisions of the Illinois Environmental Protection Act;
- B. water pollution defined and prohibited by the Illinois Environmental Protection Act;

- C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 25 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
 3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.

26. [Reserved]

27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities. Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas, the restoration and enhancement of non-tidal streams and other non-tidal open waters, and the rehabilitation or enhancement of tidal streams, tidal wetlands, and tidal open waters, provided those activities result in net increases in aquatic resource functions and services.

To be authorized by this NWP, the aquatic habitat restoration, enhancement, or establishment activity must be planned, designed, and implemented so that it results in aquatic habitat that resembles an ecological reference. An ecological reference may be based on the characteristics of an intact aquatic habitat or riparian area of the same type that exists in the region. An ecological reference may be based on a conceptual model developed from regional ecological knowledge of the target aquatic habitat type or riparian area.

To the extent that a Corps permit is required, activities authorized by this NWP include, but are not limited to: The removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms, as well as discharges of dredged or fill material to restore appropriate stream channel configurations after small water control structures, dikes, and berms, are removed; the installation of current deflectors; the enhancement, rehabilitation, or re-establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to enhance, rehabilitate, or re-establish stream meanders; the removal of stream barriers, such as undersized culverts, fords, and grade control structures; the backfilling of artificial channels; the removal of existing drainage structures, such as drain tiles, and the filling, blocking, or reshaping of drainage ditches to restore wetland hydrology; the installation of structures or fills necessary to restore or enhance wetland or stream hydrology; the construction of small nesting islands; the construction of open water areas; the construction of oyster habitat over unvegetated bottom in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; re-establishment of submerged aquatic vegetation in areas where those plant communities previously existed; re-establishment of tidal wetlands in tidal waters where those wetlands previously existed; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

This NWP authorizes the relocation of non-tidal waters, including non-tidal wetlands and streams, on the project site provided there are net increases in aquatic resource functions and services.

Except for the relocation of non-tidal waters on the project site, this NWP does not authorize the conversion of a stream or natural wetlands to another aquatic habitat type (e.g., the conversion of a stream to wetland or vice versa) or uplands. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during wetland rehabilitation activities are not considered a conversion to another aquatic habitat type. This NWP does not authorize stream channelization. This NWP does not authorize the relocation of tidal waters or the conversion of tidal waters, including tidal wetlands, to other aquatic uses, such as the conversion of tidal wetlands into open water impoundments.

Compensatory mitigation is not required for activities authorized by this NWP since these activities must result in net increases in aquatic resource functions and services.

Reversion. For enhancement, restoration, and establishment activities conducted: (1) In accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the landowner and the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the National Marine Fisheries Service (NMFS), the National Ocean Service (NOS), U.S. Forest Service (USFS), or their designated state cooperating agencies; (2) as voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) on reclaimed surface coal mine lands, in accordance with a Surface Mining Control and Reclamation Act permit issued by the Office of Surface Mining Reclamation and Enforcement (OSMRE) or the applicable state agency, this NWP also authorizes any future discharge of dredged or fill material associated with the reversion of the area to its documented prior condition and use (i.e., prior to the restoration, enhancement, or establishment activities). The reversion must occur within five years after expiration of a limited term wetland restoration or establishment agreement or permit, and is authorized in these circumstances even if the discharge occurs after this NWP expires. The five-year reversion limit does not apply to agreements without time limits reached between the landowner and the FWS, NRCS, FSA, NMFS, NOS, USFS, or an appropriate state cooperating agency. This NWP also authorizes discharges of dredged or fill material in waters of the United States for the reversion of wetlands that were restored, enhanced, or established on prior-converted cropland or on uplands, in accordance with a binding agreement between the landowner and NRCS, FSA, FWS, or their designated state cooperating agencies (even though the restoration, enhancement, or establishment activity did not require a section 404 permit). The prior condition will be documented in the original agreement or permit, and the determination of

return to prior conditions will be made by the Federal agency or appropriate state agency executing the agreement or permit. Before conducting any reversion activity the permittee or the appropriate Federal or state agency must notify the district engineer and include the documentation of the prior condition. Once an area has reverted to its prior physical condition, it will be subject to whatever the Corps Regulatory requirements are applicable to that type of land at the time. The requirement that the activity results in a net increase in aquatic resource functions and services does not apply to reversion activities meeting the above conditions. Except for the activities described above, this NWP does not authorize any future discharge of dredged or fill material associated with the reversion of the area to its prior condition. In such cases a separate permit would be required for any reversion.

Reporting. For those activities that do not require pre-construction notification, the permittee must submit to the district engineer a copy of: (1) The binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement, or a project description, including project plans and location map; (2) the NRCS or USDA Technical Service Provider documentation for the voluntary stream enhancement or restoration action or wetland restoration, enhancement, or establishment action; or (3) the SMCRA permit issued by OSMRE or the applicable state agency. The report must also include information on baseline ecological conditions on the project site, such as a delineation of wetlands, streams, and/or other aquatic habitats. These documents must be submitted to the district engineer at least 30 days prior to commencing activities in waters of the United States authorized by this NWP.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing any activity (see General Condition 32), except for the following activities:

- (1) Activities conducted on non-federal public lands and private lands, in accordance with the terms and conditions of a binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement between the landowner and the FWS, NRCS, FSA, NMFS, NOS, USFS or their designated state cooperating agencies;
- (2) Voluntary stream or wetland restoration or enhancement action, or wetland establishment action, documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or
- (3) The reclamation of surface coal mine lands, in accordance with an SMCRA permit issued by the OSMRE or the applicable state agency.

However, the permittee must submit a copy of the appropriate documentation to the district engineer to fulfill the reporting requirement. (Authorities: Sections 10 and 404)

Note: This NWP can be used to authorize compensatory mitigation projects, including mitigation banks and in-lieu fee projects. However, this NWP does not authorize the reversion of an area used for a compensatory mitigation project to its prior condition, since compensatory mitigation is generally intended to be permanent.

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 27. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 27 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THIS NATIONWIDE SPECIFIC CONDITION, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. All activities conducted under NWP 27 shall be in accordance with the provisions of 35 Ill. Adm. Code 405.108. Work in reclaimed surface coal mine areas are required to obtain prior authorization from the Illinois EPA for any activities that result in the use of acid-producing mine refuse.
2. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
3. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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

28. Modifications of Existing Marinas. Reconfiguration of existing docking facilities within an authorized marina area. No dredging, additional slips, dock spaces, or expansion of any kind within waters of the United States is authorized by this NWP. (Authority: Section 10)

29. Residential Developments. Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of a single residence, a multiple unit residential development, or a residential subdivision. This NWP authorizes the construction of building foundations and building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development).

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more

than minimal adverse environmental effects. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre.

Subdivisions: For residential subdivisions, the aggregate total loss of waters of United States authorized by this NWP cannot exceed 1/2-acre. This includes any loss of waters of the United States associated with development of individual subdivision lots.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See General Condition 32.) (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 29. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 29 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 29 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
5. The applicant is advised that the following permit(s) must be obtained from the Illinois EPA: The applicant must obtain permits to construct sanitary sewers, water mains, and related facilities prior to construction.
6. An individual Section 401 water quality certification will be required for any project where the District Engineer waives the stream length limitation of NWP 29.

30. Moist Soil Management for Wildlife. Discharges of dredged or fill material into non-tidal waters of the United States and maintenance activities that are associated with moist soil management for wildlife for the purpose of continuing ongoing, site-specific, wildlife management activities where soil manipulation is used to manage habitat and feeding areas for wildlife. Such activities include, but are not limited to, plowing or discing to impede succession, preparing seed beds, or establishing fire breaks. Sufficient riparian areas must be maintained adjacent to all open water bodies, including streams, to preclude water quality degradation due to erosion and sedimentation. This NWP does not authorize the construction of new dikes, roads, water control structures, or similar features associated with the management areas. The activity must not result in a net loss of aquatic resource functions and services. This NWP does not authorize the conversion of wetlands to uplands, impoundments, or other open water bodies. (Authority: Section 404)

Note: The repair, maintenance, or replacement of existing water control structures or the repair or maintenance of dikes may be authorized by NWP 3. Some such activities may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

***** 31. Maintenance of Existing Flood Control Facilities.** Discharges of dredged or fill material resulting from activities associated with the maintenance of existing flood control facilities, including debris basins, retention/ detention basins, levees, and channels that: (i) Were previously authorized by the Corps by individual permit, general permit, or 33 CFR 330.3, or did not require a permit at the time they were constructed, or (ii) were constructed by the Corps and transferred to a non-federal sponsor for operation and maintenance. Activities authorized by this NWP are limited to those resulting from maintenance activities that are conducted within the "maintenance baseline," as described in the definition below. Discharges of dredged or fill materials associated with maintenance activities in flood control facilities in any watercourse that have previously been determined to be within the maintenance baseline are authorized under this NWP. To the extent that a Corps permit is required, this NWP authorizes the removal of vegetation from levees associated with the flood control project. This NWP does not authorize the removal of sediment and associated vegetation from natural water courses except when these activities have been included in the maintenance baseline. All dredged and excavated material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. Proper sediment controls must be used.

Maintenance Baseline: The maintenance baseline is a description of the physical characteristics (e.g., depth, width, length, location, configuration, or design flood capacity, etc.) of a flood control project within which maintenance activities are normally authorized by NWP 31, subject to any case-specific conditions required by the district engineer. The district

engineer will approve the maintenance baseline based on the approved or constructed capacity of the flood control facility, whichever is smaller, including any areas where there are no constructed channels but which are part of the facility. The prospective permittee will provide documentation of the physical characteristics of the flood control facility (which will normally consist of as-built or approved drawings) and documentation of the approved and constructed design capacities of the flood control facility. If no evidence of the constructed capacity exists, the approved capacity will be used. The documentation will also include best management practices to ensure that the adverse environmental impacts caused by the maintenance activities are no more than minimal, especially in maintenance areas where there are no constructed channels. (The Corps may request maintenance records in areas where there has not been recent maintenance.) Revocation or modification of the final determination of the maintenance baseline can only be done in accordance with 33 CFR 330.5. Except in emergencies as described below, this NWP cannot be used until the district engineer approves the maintenance baseline and determines the need for mitigation and any regional or activity-specific conditions. Once determined, the maintenance baseline will remain valid for any subsequent reissuance of this NWP. This NWP does not authorize maintenance of a flood control facility that has been abandoned. A flood control facility will be considered abandoned if it has operated at a significantly reduced capacity without needed maintenance being accomplished in a timely manner. A flood control facility will not be considered abandoned if the prospective permittee is in the process of obtaining other authorizations or approvals required for maintenance activities and is experiencing delays in obtaining those authorizations or approvals.

Mitigation: The district engineer will determine any required mitigation one-time only for impacts associated with maintenance work at the same time that the maintenance baseline is approved. Such one-time mitigation will be required when necessary to ensure that adverse environmental effects are no more than minimal, both individually and cumulatively. Such mitigation will only be required once for any specific reach of a flood control project. However, if one-time mitigation is required for impacts associated with maintenance activities, the district engineer will not delay needed maintenance, provided the district engineer and the permittee establish a schedule for identification, approval, development, construction and completion of any such required mitigation. Once the one-time mitigation described above has been completed, or a determination made that mitigation is not required, no further mitigation will be required for maintenance activities within the maintenance baseline (see Note, below). In determining appropriate mitigation, the district engineer will give special consideration to natural water courses that have been included in the maintenance baseline and require mitigation and/or best management practices as appropriate.

Emergency Situations: In emergency situations, this NWP may be used to authorize maintenance activities in flood control facilities for which no maintenance baseline has been approved. Emergency situations are those which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if action is not taken before a maintenance baseline can be approved. In such situations, the determination of mitigation requirements, if any, may be deferred until the emergency has been resolved. Once the emergency has ended, a maintenance baseline must be established expeditiously, and mitigation, including mitigation for maintenance conducted during the emergency, must be required as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer before any maintenance work is conducted (see general condition 32). The Pre-construction notification may be for activity-specific maintenance or for maintenance of the entire flood control facility by submitting a five-year (or less) maintenance plan. The Pre-construction notification must include a description of the maintenance baseline and the disposal site for dredged or excavated material. (Authorities: Sections 10 and 404)

Note: If the maintenance baseline was approved by the district engineer under a prior version of NWP 31, and the district engineer imposed the one-time compensatory mitigation requirement on maintenance for a specific reach of a flood control project authorized by that prior version of NWP 31, during the period this version of NWP 31 is in effect (March 19, 2017, to March 18, 2022) the district engineer will not require additional compensatory mitigation for maintenance activities authorized by this NWP in that specific reach of the flood control project.

32. Completed Enforcement Actions. Any structure, work, or discharge of dredged or fill material remaining in place or undertaken for mitigation, restoration, or environmental benefit in compliance with either:

- i The terms of a final written Corps non-judicial settlement agreement resolving a violation of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899; or the terms of an EPA 309(a) order on consent resolving a violation of section 404 of the Clean Water Act, provided that:
 - (a) The activities authorized by this NWP cannot adversely affect more than 5 acres of non-tidal waters or 1 acre of tidal waters;
 - (b) The settlement agreement provides for environmental benefits, to an equal or greater degree, than the environmental detriments caused by the unauthorized activity that is authorized by this NWP; and
 - (c) The district engineer issues a verification letter authorizing the activity subject to the terms and conditions of this NWP and the settlement agreement, including a specified completion date; or
- ii The terms of a final Federal court decision, consent decree, or settlement agreement resulting from an enforcement action brought by the United States under section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899; or
- iii The terms of a final court decision, consent decree, settlement agreement, or non-judicial settlement agreement resulting from a natural resource damage claim brought by a trustee or trustees for natural resources (as defined by the National Contingency Plan at 40 CFR subpart G) under Section 311 of the Clean Water Act, Section 107 of the Comprehensive Environmental Response, Compensation and

Liability Act, Section 312 of the National Marine Sanctuaries Act, Section 1002 of the Oil Pollution Act of 1990, or the Park System Resource Protection Act at 16 U.S.C. 19jj, to the extent that a Corps permit is required.

Compliance is a condition of the NWP itself; non-compliance of the terms and conditions of an NWP 32 authorization may result in an additional enforcement action (e.g., a Class I civil administrative penalty). Any authorization under this NWP is automatically revoked if the permittee does not comply with the terms of this NWP or the terms of the court decision, consent decree, or judicial/non-judicial settlement agreement. This NWP does not apply to any activities occurring after the date of the decision, decree, or agreement that are not for the purpose of mitigation, restoration, or environmental benefit. Before reaching any settlement agreement, the Corps will ensure compliance with the provisions of 33 CFR part 326 and 33 CFR 330.6(d)(2) and (e). (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 32. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 32 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
3. Except as allowed under condition 9, any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by the Illinois EPA. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
5. The applicant for Nationwide Permit 32 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
6. The applicant is advised that the following permit(s) must be obtained from the Illinois EPA: The applicant must obtain permits to construct sanitary sewers, water mains, and related facilities prior to construction.
7. Backfill used in the stream-crossing trench shall be predominantly sand or larger size material, with <20% passing a #230 U.S. sieve.
8. Any channel relocation shall be constructed under dry conditions and stabilized to prevent erosion prior to the diversion of flow.
9. Backfill used within trenches passing through surface water of the State, except wetland areas, shall be clean course aggregate, gravel or other material which will not cause siltation, pipe damage during placement, or chemical corrosion in place. Excavated material may be used only if:
 - A. Particle size analysis is conducted and demonstrates the material to be at least 80% sand or larger size material, using a #230 U.S. sieve; or
 - B. Excavation and backfilling are done under dry conditions.
10. Backfill used within trenches passing through wetland areas shall consist of clean material which will not cause siltation, pipe damage during placement, or chemical corrosion in place. Excavated material shall be used to the extent practicable, with the upper six (6) to twelve (12) inches backfilled with the topsoil obtained during trench excavation.
11. Any applicant proposing activities in a mined area or previously mined area shall provide to the IEPA a written determination regarding whether the sediment and materials that will be used are considered "acid-producing material" as defined in 35 Il. Adm. Code, Subtitle D. If considered "acid-producing material," the applicant shall obtain a permit to construct pursuant to 35 Il. Adm. Code 404.101.
12. Asphalt, bituminous material and concrete with protruding material such as reinforcing bar or mesh shall not be 1) used for backfill, 2) placed on shorelines/stream banks, or 3) placed in waters of the State.

33. Temporary Construction, Access, and Dewatering. Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard. This NWP also authorizes temporary structures, work, and discharges, including cofferdams, necessary for construction activities not otherwise subject to the Corps or U.S. Coast Guard permit requirements. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if the district engineer determines that it will not cause more than minimal adverse environmental effects. Following completion of construction, temporary fill

must be entirely removed to an area that has no waters of the United States, dredged material must be returned to its original location, and the affected areas must be restored to pre-construction elevations. The affected areas must also be revegetated, as appropriate. This permit does not authorize the use of cofferdams to dewater wetlands or other aquatic areas to change their use. Structures left in place after construction is completed require a separate Section 10 permit if located in navigable waters of the United States. (See 33 CFR part 322.)

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the activity is conducted in navigable waters of the United States (i.e., Section 10 waters) (see general condition 32). The pre-construction notification must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions. (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 33. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 33 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, as determined by the Illinois EPA.
2. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
3. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
5. The applicant for Nationwide Permit 33 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
6. Temporary work pads, cofferdams, access roads and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, pre-fabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities.
7. The applicant for Nationwide Permit 33 who uses temporary work pads, cofferdams, access roads and other temporary fills in order to perform work in creeks, streams, or rivers shall maintain flow in these waters by utilizing dam and pumping, fluming, culverts or other such techniques.
8. During dewatering of the coffered work area, all sediment-laden water shall have adequate sediment removed such that water quality standards, including preventing unnatural turbidity, are met in the receiving stream.

***** 34. Cranberry Production Activities.** Discharges of dredged or fill material for dikes, berms, pumps, water control structures or leveling of cranberry beds associated with expansion, enhancement, or modification activities at existing cranberry production operations. The cumulative total acreage of disturbance per cranberry production operation, including but not limited to, filling, flooding, ditching, or clearing, must not exceed 10 acres of waters of the United States, including wetlands. The activity must not result in a net loss of wetland acreage. This NWP does not authorize any discharge of dredged or fill material related to other cranberry production activities such as warehouses, processing facilities, or parking areas. For the purposes of this NWP, the cumulative total of 10 acres will be measured over the period that this NWP is valid.

Notification: The permittee must submit a pre-construction notification to the district engineer once during the period that this NWP is valid, and the NWP will then authorize discharges of dredge or fill material at an existing operation for the permit term, provided the 10-acre limit is not exceeded. (See general condition 32.) (Authority: Section 404)

35. Maintenance Dredging of Existing Basins. The removal of accumulated sediment for maintenance of existing marina basins, access channels to marinas or boat slips, and boat slips to previously authorized depths or controlling depths for ingress/egress, whichever is less. All dredged material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. Proper sediment controls must be used for the disposal site. (Authority: Section 10)

36. Boat Ramps. Activities required for the construction of boat ramps, provided the activity meets all of the following criteria:

- (a) The discharge into waters of the United States does not exceed 50 cubic yards of concrete, rock, crushed stone or gravel into forms, or in the form of pre-cast concrete planks or slabs, unless the district engineer waives the 50

- (b) cubic yard limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects; The boat ramp does not exceed 20 feet in width, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;
- (c) The base material is crushed stone, gravel or other suitable material;
- (d) The excavation is limited to the area necessary for site preparation and all excavated material is removed to an area that has no waters of the United States; and,
- (e) No material is placed in special aquatic sites, including wetlands.

The use of unsuitable material that is structurally unstable is not authorized. If dredging in navigable waters of the United States is necessary to provide access to the boat ramp, the dredging must be authorized by another NWP, a regional general permit, or an individual permit.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The discharge into waters of the United States exceeds 50 cubic yards, or (2) the boat ramp exceeds 20 feet in width. (See general condition 32.) (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 36. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 36 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 36 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

***** 37. Emergency Watershed Protection and Rehabilitation.** Work done by or funded by:

- (a) The Natural Resources Conservation Service for a situation requiring immediate action under its emergency Watershed Protection Program (7 CFR part 624);
- (b) The U.S. Forest Service under its Burned-Area Emergency Rehabilitation Handbook (FSH 2509.13);
- (c) The Department of the Interior for wildland fire management burned area emergency stabilization and rehabilitation (DOI Manual part 620, Ch. 3);
- (d) The Office of Surface Mining, or states with approved programs, for abandoned mine land reclamation activities under Title IV of the Surface Mining Control and Reclamation Act (30 CFR subchapter R), where the activity does not involve coal extraction; or
- (e) The Farm Service Agency under its Emergency Conservation Program (7 CFR part 701).

In general, the prospective permittee should wait until the district engineer issues an NWP verification or 45 calendar days have passed before proceeding with the watershed protection and rehabilitation activity. However, in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur, the emergency watershed protection and rehabilitation activity may proceed immediately and the district engineer will consider the information in the pre-construction notification and any comments received as a result of agency coordination to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

Notification: Except in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). (Authorities: Sections 10 and 404)

38. Cleanup of Hazardous and Toxic Waste. Specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Court ordered remedial action plans or related settlements are also authorized by this NWP. This NWP does not authorize the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Note: Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA as approved or required by EPA, are not required to obtain permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 38. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 38 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. In addition to any actions required of the NWP applicant with respect to the "Notification" General Condition 32, the applicant shall notify the Illinois EPA, Bureau of Water, of the specific activity. This notification shall include information concerning the orders and approvals that have been or will be obtained from the Illinois EPA Bureau of Land (BOL), for all cleanup activities under BOL jurisdiction or for which authorization or approval is sought from BOL for no further remedial action.
3. An individual Section 401 water quality certification will be required for activities that do not require or will not receive authorization or approval from the BOL.

39. Commercial and Institutional Developments. Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of commercial and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures. Attendant features may include, but are not limited to, roads, parking lots, garages, yards, utility lines, storm water management facilities, wastewater treatment facilities, and recreation facilities such as playgrounds and playing fields. Examples of commercial developments include retail stores, industrial facilities, restaurants, business parks, and shopping centers. Examples of institutional developments include schools, fire stations, government office buildings, judicial buildings, public works buildings, libraries, hospitals, and places of worship. The construction of new golf courses and new ski areas is not authorized by this NWP.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Note: For any activity that involves the construction of a wind energy generating structure, solar tower, or overhead transmission line, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 39. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 39 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 39 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

5. The applicant is advised that the following permit(s) must be obtained from the Illinois EPA: The applicant must obtain permits to construct sanitary sewers, water mains, water treatment plants, wastewater treatment plants and related facilities prior to construction.
6. An individual Section 401 water quality certification will be required for any project where the District Engineer waives the stream length limitation of NWP 39.
7. For construction of oil and gas wells, the impacted waters of the State shall be restored to pre-construction conditions within six months after construction is started. For purposes of this condition, restoration includes stabilization and seeding or planting of vegetation on the disturbed areas that were vegetated prior to construction.

40. Agricultural Activities. Discharges of dredged or fill material into non-tidal waters of the United States for agricultural activities, including the construction of building pads for farm buildings. Authorized activities include the installation, placement, or construction of drainage tiles, ditches, or levees; mechanized land clearing; land leveling; the relocation of existing serviceable drainage ditches constructed in waters of the United States; and similar activities.

This NWP also authorizes the construction of farm ponds in non-tidal waters of the United States, excluding perennial streams, provided the farm pond is used solely for agricultural purposes. This NWP does not authorize the construction of aquaculture ponds.

This NWP also authorizes discharges of dredged or fill material into non-tidal waters of the United States to relocate existing serviceable drainage ditches constructed in non-tidal streams. The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States.

The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Section 404)

Note: Some discharges for agricultural activities may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4). This NWP authorizes the construction of farm ponds that do not qualify for the Clean Water Act section 404(f)(1)(C) exemption because of the recapture provision at section 404(f)(2).

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 40. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 40 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 40 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

41. Reshaping Existing Drainage Ditches. Discharges of dredged or fill material into non-tidal waters of the United States, excluding non-tidal wetlands adjacent to tidal waters, to modify the cross-sectional configuration of currently serviceable drainage ditches constructed in waters of the United States, for the purpose of improving water quality by regrading the drainage ditch with gentler slopes, which can reduce erosion, increase growth of vegetation, and increase uptake of nutrients and other substances by vegetation. The reshaping of the ditch cannot increase drainage capacity beyond the original as-built capacity nor can it expand the area drained by the ditch as originally constructed (i.e., the capacity of the ditch must be the same as originally constructed and it cannot drain additional wetlands or other waters of the United States). Compensatory mitigation is not required because the work is designed to improve water quality.

This NWP does not authorize the relocation of drainage ditches constructed in waters of the United States; the location of the centerline of the reshaped drainage ditch must be

approximately the same as the location of the centerline of the original drainage ditch. This NWP does not authorize stream channelization or stream relocation projects. (Authority: Section 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 41. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 41 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 41 shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by the Illinois EPA. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
5. The applicant for Nationwide Permit 41 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
6. The applicant is advised that the following permit(s) must be obtained from the Agency: permits to construct sanitary sewers, water mains and related facilities prior to construction.
7. The proposed work shall be constructed with adequate erosion control measures (i.e., silt fences, etc.) to prevent transport of sediment and materials to the adjoining wetlands and/or streams.

42. Recreational Facilities. Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of recreational facilities. Examples of recreational facilities that may be authorized by this NWP include playing fields (e.g., football fields, baseball fields), basketball courts, tennis courts, hiking trails, bike paths, golf courses, ski areas, horse paths, nature centers, and campgrounds (excluding recreational vehicle parks). This NWP also authorizes the construction or expansion of small support facilities, such as maintenance and storage buildings and stables that are directly related to the recreational activity, but it does not authorize the construction of hotels, restaurants, racetracks, stadiums, arenas, or similar facilities.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 42. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 42 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 42 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken

and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

5. An individual Section 401 water quality certification will be required for any project where the District Engineer waives the stream length limitation of NWP 42.

43. Stormwater Management Facilities. Discharges of dredged or fill material into non-tidal waters of the United States for the construction of stormwater management facilities, including stormwater detention basins and retention basins and other stormwater management facilities; the construction of water control structures, outfall structures and emergency spillways; the construction of low impact development integrated management features such as bioretention facilities (e.g., rain gardens), vegetated filter strips, grassed swales, and infiltration trenches; and the construction of pollutant reduction green infrastructure features designed to reduce inputs of sediments, nutrients, and other pollutants into waters to meet reduction targets established under Total Daily Maximum Loads set under the Clean Water Act.

This NWP authorizes, to the extent that a section 404 permit is required, discharges of dredged or fill material into non-tidal waters of the United States for the maintenance of stormwater management facilities, low impact development integrated management features, and pollutant reduction green infrastructure features. The maintenance of stormwater management facilities, low impact development integrated management features, and pollutant reduction green infrastructure features that are not waters of the United States does not require a section 404 permit.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges of dredged or fill material for the construction of new stormwater management facilities in perennial streams.

Notification: For discharges into non-tidal waters of the United States for the construction of new stormwater management facilities or pollutant reduction green infrastructure features, or the expansion of existing stormwater management facilities or pollutant reduction green infrastructure features, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) Maintenance activities do not require pre-construction notification if they are limited to restoring the original design capacities of the stormwater management facility or pollutant reduction green infrastructure feature. (Authority: Section 404))

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 43. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 43 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The Agency hereby issues Section 401 water quality certification of Nationwide Permit 43 exclusively for the construction and maintenance of pollutant reduction green infrastructure features designed to reduce inputs of sediments, nutrients, and other pollutants into waters to meet reduction targets established under Total Daily Maximum Loads set under the Clean Water Act. All other activities authorized under this Nationwide Permit are denied Section 401 water quality certification. For purposes of this water quality certification green infrastructure means wet weather management approaches and technologies that utilize, enhance or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse. Green infrastructure approaches currently in use include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, porous and permeable pavements, porous piping systems, dry wells, vegetated median strips, reforestation/revegetation, rain barrels and cisterns and protection and enhancement of riparian buffers and floodplains. Material excavated, dredged or produced from the maintenance of green infrastructure features shall not be discharged to waters of the State.
2. The applicant for Nationwide Permit 43 shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
3. The applicant for Nationwide Permit 43 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
4. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
5. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The

applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

44. Mining Activities. Discharges of dredged or fill material into non-tidal waters of the United States for mining activities, except for coal mining activities, provided the activity meets all of the following criteria:

- (a) For mining activities involving discharges of dredged or fill material into non-tidal wetlands, the discharge must not cause the loss of greater than 1/2-acre of non-tidal wetlands;
- (b) For mining activities involving discharges of dredged or fill material in non-tidal open waters (e.g., rivers, streams, lakes, and ponds) the mined area, including permanent and temporary impacts due to discharges of dredged or fill material into jurisdictional waters, must not exceed 1/2-acre; and
- (c) The acreage loss under paragraph (a) plus the acreage impact under paragraph (b) does not exceed 1/2-acre.

The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects.

The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre.

This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction-notification to the district engineer prior to commencing the activity. (See general condition 32.) If reclamation is required by other statutes, then a copy of the final reclamation plan must be submitted with the pre-construction notification. (Authorities: Sections 10 and 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 44. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 44 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 44 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. The facility shall be covered by either a Subtitle D NPDES mining permit or a Subtitle D State Construction and Operating Permit for mining activities.
5. An individual Section 401 water quality certification will be required for any project where the District Engineer waives the stream length limitation of NWP 44.

45. Repair of Uplands Damaged by Discrete Events. This NWP authorizes discharges of dredged or fill material, including dredging or excavation, into all waters of the United States for activities associated with the restoration of upland areas damaged by storms, floods, or other discrete events. This NWP authorizes bank stabilization to protect the restored uplands. The restoration of the damaged areas, including any bank stabilization, must not exceed the contours, or ordinary high water mark, that existed before the damage occurred. The district engineer retains the right to determine the extent of the pre-existing conditions and the extent of any restoration work authorized by this NWP. The work must commence, or be under contract to commence, within two years of the date of damage, unless this condition is waived in writing by the district engineer. This NWP cannot be used to reclaim lands lost to normal erosion processes over an extended period.

This NWP does not authorize beach restoration or nourishment.

Minor dredging is limited to the amount necessary to restore the damaged upland area and should not significantly alter the pre-existing bottom contours of the waterbody.

Notification: The permittee must submit a pre-construction notification to the district engineer (see general condition 32) within 12 months of the date of the damage; for major storms, floods, or other discrete events, the district engineer may waive the 12-month limit for submitting a pre-construction notification if the permittee can demonstrate funding, contract, or other similar delays. The pre-construction notification must include documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration. (Authority: Sections 10 and 404)

Note: The uplands themselves that are lost as a result of a storm, flood, or other discrete event can be replaced without a section 404 permit, if the uplands are restored to the ordinary high water mark (in non-tidal waters) or high tide line (in tidal waters). (See also 33 CFR 328.5.) This NWP authorizes discharges of dredged or fill material into waters of the United States associated with the restoration of uplands

46. Discharges in Ditches. Discharges of dredged or fill material into non-tidal ditches that are: (1) Constructed in uplands, (2) receive water from an area determined to be a water of the United States prior to the construction of the ditch, (3) divert water to an area determined to be a water of the United States prior to the construction of the ditch, and (4) determined to be waters of the United States. The discharge must not cause the loss of greater than one acre of waters of the United States.

This NWP does not authorize discharges of dredged or fill material into ditches constructed in streams or other waters of the United States, or in streams that have been relocated in uplands. This NWP does not authorize discharges of dredged or fill material that increase the capacity of the ditch and drain those areas determined to be waters of the United States prior to construction of the ditch.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 404)

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 46. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 46 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by the Illinois EPA. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
5. The applicant for Nationwide Permit 46 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
6. The applicant is advised that the following permit(s) must be obtained from the Agency: permits to construct sanitary sewers, water mains and related facilities prior to construction.
7. The proposed work shall be constructed with adequate erosion control measures (i.e., silt fences, etc.) to prevent transport of sediment and materials to the adjoining wetlands and/or streams.
8. The applicant shall not sever the connection between upstream and downstream surface waters of the State by the discharge of dredged or fill material into ditches.

47. [Reserved]

***** 48. Commercial Shellfish Aquaculture Activities.** Discharges of dredged or fill material into waters of the United States or structures or work in navigable waters of the United States necessary for new and continuing commercial shellfish aquaculture operations in authorized project areas. For the purposes of this NWP, the project area is the area in which the operator is authorized to conduct commercial shellfish aquaculture activities, as identified through a lease or permit issued by an appropriate state or local government agency, a treaty, or any easement, lease, deed, contract, or other legally binding agreement that establishes an enforceable property interest for the operator. A "new commercial shellfish aquaculture operation" is an operation in a project area where commercial shellfish aquaculture activities have not been conducted during the past 100 years.

This NWP authorizes the installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures into navigable waters of the United States. This NWP also authorizes discharges of dredged or fill material into waters of the United States necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities. Rafts and other floating structures must be securely anchored and clearly marked.

This NWP does not authorize:

- (a) The cultivation of a nonindigenous species unless that species has been previously cultivated in the waterbody;
- (b) The cultivation of an aquatic nuisance species as defined in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990;
- (c) Attendant features such as docks, piers, boat ramps, stockpiles, or staging areas, or the deposition of shell material back into waters of the United States as waste; or

- (d) Activities that directly affect more than 1/2-acre of submerged aquatic vegetation beds in project areas that have not been used for commercial shellfish aquaculture activities during the past 100 years.

Notification: The permittee must submit a pre-construction notification to the district engineer if: (1) The activity will include a species that has never been cultivated in the waterbody; or (2) the activity occurs in a project area that has not been used for commercial shellfish aquaculture activities during the past 100 years. If the operator will be conducting commercial shellfish aquaculture activities in multiple contiguous project areas, he or she can either submit one PCN for those contiguous project areas or submit a separate PCN for each project area. (See general condition 32.)

In addition to the information required by paragraph (b) of general condition 32, the pre-construction notification must also include the following information: (1) A map showing the boundaries of the project area(s), with latitude and longitude coordinates for each corner of each project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area(s) (a detailed survey is not required). No more than one pre-construction notification per project area or group of contiguous project areas should be submitted for the commercial shellfish operation during the effective period of this NWP. The pre-construction notification should describe all species and culture activities the operator expects to undertake in the project area or group of contiguous project areas during the effective period of this NWP. If an operator intends to undertake unanticipated changes to the commercial shellfish aquaculture operation during the effective period of this NWP, and those changes require Department of the Army authorization, the operator must contact the district engineer to request a modification of the NWP verification; a new Pre-construction notification does not need to be submitted (Authorities: Sections 10 and 404)

Note 1: The permittee should notify the applicable U.S. Coast Guard office regarding the project.

Note 2: To prevent introduction of aquatic nuisance species, no material that has been taken from a different waterbody may be reused in the current project area, unless it has been treated in accordance with the applicable regional aquatic nuisance species management plan.

Note 3: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 defines "aquatic nuisance species" as "a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural, or recreational activities dependent on such waters."

***** 49. Coal Remining Activities.** Activities. Discharges of dredged or fill material into non-tidal waters of the United States associated with the remining and reclamation of lands that were previously mined for coal. The activities must already be authorized, or they must currently be in process as part of an integrated permit processing procedure, by the Department of the Interior Office of Surface Mining Reclamation and Enforcement, or by states with approved programs under Title IV or Title V of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). Areas previously mined include reclaimed mine sites, abandoned mine land areas, or lands under bond forfeiture contracts.

As part of the project, the permittee may conduct new coal mining activities in conjunction with the remining activities when he or she clearly demonstrates to the district engineer that the overall mining plan will result in a net increase in aquatic resource functions. The Corps will consider the SMCRA agency's decision regarding the amount of currently undisturbed adjacent lands needed to facilitate the remining and reclamation of the previously mined area. The total area disturbed by new mining must not exceed 40 percent of the total acreage covered by both the remined area and the additional area necessary to carry out the reclamation of the previously mined area.

The permittee must submit a pre-construction notification and a document describing how the overall mining plan will result in a net increase in aquatic resource functions to the district engineer and receive written authorization prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

***** 50. Underground Coal Mining Activities.** Discharges of dredged or fill material into non-tidal waters of the United States associated with underground coal mining and reclamation operations provided the activities are authorized, or are currently being processed as part of an integrated permit processing procedure, by the Department of the Interior, Office of Surface Mining Reclamation and Enforcement, or by states with approved programs under Title V of the Surface Mining Control and Reclamation Act of 1977.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. This NWP does not authorize coal preparation and processing activities outside of the mine site.

Notification: The permittee must submit a pre-construction notification to the district engineer and receive written authorization prior to commencing the activity. (See general condition 32.) If reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre-construction notification. (Authorities: Sections 10 and 404)

Note: Coal preparation and processing activities outside of the mine site may be authorized by NWP 21.

51. Land-Based Renewable Energy Generation Facilities. Discharges of dredged or fill material into non-tidal waters of the United States for the construction, expansion, or modification of land-based renewable energy production facilities, including attendant features. Such facilities include infrastructure to collect solar (concentrating solar power and photovoltaic), wind,

biomass, or geothermal energy. Attendant features may include, but are not limited to roads, parking lots, and stormwater management facilities within the land-based renewable energy generation facility.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the discharge results in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Utility lines constructed to transfer the energy from the land-based renewable energy generation facility to a distribution system, regional grid, or other facility are generally considered to be linear projects and each separate and distant crossing of a waterbody is eligible for treatment as a separate single and complete linear project. Those utility lines may be authorized by NWP 12 or another Department of the Army authorization.

Note 2: If the only activities associated with the construction, expansion, or modification of a land-based renewable energy generation facility that require Department of the Army authorization are discharges of dredged or fill material into waters of the United States to construct, maintain, repair, and/or remove utility lines and/or road crossings, then NWP 12 and/or NWP 14 shall be used if those activities meet the terms and conditions of NWPs 12 and 14, including any applicable regional conditions and any case-specific conditions imposed by the district engineer.

Note 3: For any activity that involves the construction of a wind energy generating structure, solar tower, or overhead transmission line, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 51. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 51 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 51 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
5. An individual Section 401 water quality certification will be required for any project where the District Engineer waives the stream length limitation of NWP 51.

52. Water-Based Renewable Energy Generation Pilot Projects. Structures and work in navigable waters of the United States and discharges of dredged or fill material into waters of the United States for the construction, expansion, modification, or removal of water-based wind, water-based solar, wave energy, or hydrokinetic renewable energy generation pilot projects and their attendant features. Attendant features may include, but are not limited to, land-based collection and distribution facilities, control facilities, roads, parking lots, and stormwater management facilities.

For the purposes of this NWP, the term "pilot project" means an experimental project where the water-based renewable energy generation units will be monitored to collect information on their performance and environmental effects at the project site.

The discharge must not cause the loss of greater than 1/2-acre of waters of the United States, including the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre.

The placement of a transmission line on the bed of a navigable water of the United States from the renewable energy generation unit(s) to a land-based collection and distribution facility is considered a structure under Section 10 of the Rivers and Harbors Act of 1899 (see 33 CFR

322.2(b)), and the placement of the transmission line on the bed of a navigable water of the United States is not a loss of waters of the United States for the purposes of applying the 1/2-acre or 300 linear foot limits.

For each single and complete project, no more than 10 generation units (e.g., wind turbines, wave energy devices, or hydrokinetic devices) are authorized. For floating solar panels in navigable waters of the United States, each single and complete project cannot exceed 1/2-acre in water surface area covered by the floating solar panels.

This NWP does not authorize activities in coral reefs. Structures in an anchorage area established by the U.S. Coast Guard must comply with the requirements in 33 CFR 322.5(l)(2). Structures may not be placed in established danger zones or restricted areas designated in 33 CFR part 334, Federal navigation channels, shipping safety fairways or traffic separation schemes established by the U.S. Coast Guard (see 33 CFR 322.5(l)(1)), or EPA or Corps designated open water dredged material disposal areas.

Upon completion of the pilot project, the generation units, transmission lines, and other structures or fills associated with the pilot project must be removed to the maximum extent practicable unless they are authorized by a separate Department of the Army authorization, such as another NWP, an individual permit, or a regional general permit. Completion of the pilot project will be identified as the date of expiration of the Federal Energy Regulatory Commission (FERC) license, or the expiration date of the NWP authorization if no FERC license is required.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.)
(Authorities: Sections 10 and 404)

Note 1: Utility lines constructed to transfer the energy from the land-based collection facility to a distribution system, regional grid, or other facility are generally considered to be linear projects and each separate and distant crossing of a waterbody is eligible for treatment as a separate single and complete linear project. Those utility lines may be authorized by NWP 12 or another Department of the Army authorization.

Note 2: An activity that is located on an existing locally or federally maintained U.S. Army Corps of Engineers project requires separate approval from the Chief of Engineers or District Engineer under 33 U.S.C. 408.

Note 3: If the pilot project generation units, including any transmission lines, are placed in navigable waters of the United States (i.e., Section 10 waters) within the coastal United States, the Great Lakes, and United States territories, copies of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration, National Ocean Service, for charting the generation units and associated transmission line(s) to protect navigation.

Note 4: Hydrokinetic renewable energy generation projects that require authorization by the Federal Energy Regulatory Commission under the Federal Power Act of 1920 do not require separate authorization from the Corps under Section 10 of the Rivers and Harbors Act of 1899.

Note 5: For any activity that involves the construction of a wind energy generating structure, solar tower, or overhead transmission line, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 52. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 52 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
2. The applicant for Nationwide Permit 52 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.
5. An individual Section 401 water quality certification will be required for any project where the District Engineer waives the stream length limitation of NWP 52.
6. An individual Section 401 water quality certification will be required for any hydrokinetic project that is not previously approved by a Section 401 water quality certification issued by the Illinois EPA for a Federal Energy Regulatory Commission license or permit.

53. Removal of Low-Head Dams. Structures and work in navigable waters of the United States and discharges of dredged or fill material into waters of the United States associated with the removal of low-head dams.

For the purposes of this NWP, the term "low-head dam" is defined as a dam built across a stream to pass flows from upstream over all, or nearly all, of the width of the dam crest on a

continual and uncontrolled basis. (During a drought, there might not be water flowing over the dam crest.) In general, a low-head dam does not have a separate spillway or spillway gates but it may have an uncontrolled spillway. The dam crest is the top of the dam from left abutment to right abutment, and if present, an uncontrolled spillway. A low-head dam provides little storage function.

The removed low-head dam structure must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

Because the removal of the low-head dam will result in a net increase in ecological functions and services provided by the stream, as a general rule compensatory mitigation is not required for activities authorized by this NWP. However, the district engineer may determine for a particular low-head dam removal activity that compensatory mitigation is necessary to ensure the authorized activity results in no more than minimal adverse environmental effects.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.)
(Authorities: Sections 10 and 404)

Note: This NWP does not authorize discharges of dredged or fill material into waters of the United States or structures or work in navigable waters to restore the stream in the vicinity of the low-head dam, including the former impoundment area. Nationwide permit 27 or other Department of the Army permits may authorize such activities. This NWP does not authorize discharges of dredged or fill material into waters of the United States or structures or work in navigable waters to stabilize stream banks. Bank stabilization activities may be authorized by NWP 13 or other Department of the Army permits.

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 53. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 53 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. The applicant shall implement the following Best Management Practices and Material Testing:
 - A. Sediments and river bottom material are excavated and removed to upland areas to minimize sediment transport downstream, minimize downcutting and protect water quality; or
 - B. measures shall be implemented to minimize sediment transport downstream; or
 - C. the sediments and river bottom materials that will be transported downstream are determined to have less than 20 percent passing a #230 U.S. Sieve based on representative sampling and analysis of the sediments and river bottom materials; or
 - D. a combination of the above practices to protect water quality; and sediments and river bottom materials shall not be polluttional if released to downstream waters.
2. Best Management Practices shall be implemented to minimize sediment transport downstream, minimize downcutting of sediment and river bottom materials and protect water quality.
3. The project shall be required to obtain individual 401 water quality certification if a public or food processing surface water intake is located within the upstream pool of the dam to be removed.
4. The applicant shall notify downstream surface water supplies of the proposed dam removal. The applicant shall implement practices to prevent interference with Public and Food Processing Water Supply intakes. The Illinois EPA's Division of Public Water Supply may be contacted at 217/782-1020 for information on the Public and Food Processing Water Supplies.
5. The applicant for Nationwide Permit 53 shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
6. The applicant for Nationwide Permit 53 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
7. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
8. All areas affected by construction shall be stabilized or mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

54. Living Shorelines. Structures and work in navigable waters of the United States and discharges of dredged or fill material into waters of the United States for the construction and maintenance of living shorelines to stabilize banks and shores in coastal waters, which includes the Great Lakes, along shores with small fetch and gentle slopes that are subject to low- to mid-energy waves. A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural "soft" elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock

sills) for added protection and stability. Living shorelines should maintain the natural continuity of the land-water interface, and retain or enhance shoreline ecological processes. Living shorelines must have a substantial biological component, either tidal or lacustrine fringe wetlands or oyster or mussel reef structures. The following conditions must be met:

- (a) The structures and fill area, including sand fills, sills, breakwaters, or reefs, cannot extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes, unless the district engineer waives this criterion by making a written determination concluding that the activity will result in no more than minimal adverse environmental effects;
- (b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the activity will result in no more than minimal adverse environmental effects;
- (c) Coir logs, coir mats, stone, native oyster shell, native wood debris, and other structural materials must be adequately anchored, of sufficient weight, or installed in a manner that prevents relocation in most wave action or water flow conditions, except for extremely severe storms;
- (d) For living shorelines consisting of tidal or lacustrine fringe wetlands, native plants appropriate for current site conditions, including salinity, must be used if the site is planted by the permittee;
- (e) Discharges of dredged or fill material into waters of the United States, and oyster or mussel reef structures in navigable waters, must be the minimum necessary for the establishment and maintenance of the living shoreline;
- (f) If sills, breakwaters, or other structures must be constructed to protect fringe wetlands for the living shoreline, those structures must be the minimum size necessary to protect those fringe wetlands;
- (g) The activity must be designed, constructed, and maintained so that it has no more than minimal adverse effects on water movement between the waterbody and the shore and the movement of aquatic organisms between the waterbody and the shore; and
- (h) The living shoreline must be properly maintained, which may require periodic repair of sills, breakwaters, or reefs, or replacing sand fills after severe storms or erosion events. Vegetation may be replanted to maintain the living shoreline. This NWP authorizes those maintenance and repair activities, including any minor deviations necessary to address changing environmental conditions.

This NWP does not authorize beach nourishment or land reclamation activities.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the construction of the living shoreline. (See general condition 32.) The pre-construction notification must include a delineation of special aquatic sites (see paragraph (b) (4) of general condition 32). Pre-construction notification is not required for maintenance and repair activities for living shorelines unless required by applicable NWP general conditions or regional conditions. (Authorities: Sections 10 and 404)

Note: In waters outside of coastal waters, nature-based bank stabilization techniques, such as bioengineering and vegetative stabilization, may be authorized by NWP 13.

NOTE: THE IEPA HAS CONDITIONED SECTION 401 WATER QUALITY CERTIFICATION APPLICABLE TO NATIONWIDE PERMIT 54. DEPARTMENT OF THE ARMY AUTHORIZATION PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT (33 U.S.C. 1344) UNDER NATIONWIDE PERMIT 54 WILL BE SUBJECT TO THE THREE GENERAL IEPA CONDITIONS, THESE NATIONWIDE SPECIFIC CONDITIONS, AND THE CONDITIONS PUBLISHED IN SECTION C.

1. An individual Section 401 water quality certification shall be required for any project that exceeds 1000 feet as measured along the bank and or when the District Engineer waives the limitation of 30 feet as measured from the mean high water line.
2. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
3. The applicant for Nationwide Permit 54 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
4. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
5. All areas affected by construction shall be stabilized or mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) 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.

C. Nationwide Permit General Conditions

To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.
15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.
16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river,

- has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
- (b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.
- (c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.
17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.
18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.
- (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
- (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
- (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.
- (e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.
- (f) If the non-federal permittee has a valid ESA Section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA Section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA Section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA Section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA Section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction

- notification whether the ESA Section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.
- (g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world-wide-web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.
19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.
20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
- (b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under Section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with Section 106.
- (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of Section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA Section 106 consultation has been completed.
- (d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. If NHPA Section 106 consultation is required, the district engineer will notify the non-federal applicant that he or she cannot begin the activity until Section 106 consultation is completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
- (e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/ THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.
21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the

- activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.
- (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
- (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with General Condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.
23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:
- (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
- (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.
- (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require Pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.
- (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).
- (e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
- (f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
- (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.
- (2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).
- (3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

- (4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).
 - (5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.
 - (6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).
 - (g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.
 - (h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
 - (i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.
24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.
 25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.
 26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.
 27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.
 28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.
 29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

 (Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:
- (a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
 - (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(1)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
 - (c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.
31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of General Condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.
32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:
- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
 - (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).
- (b) Contents of pre-Construction Notification: The PCN must be in writing and include the following information:
- (1) Name, address and telephone numbers of the prospective permittee;
 - (2) Location of the proposed activity;
 - (3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;
 - (4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow

- the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
 - (6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
 - (7) For non-federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;
 - (8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act;
 - (9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and
 - (10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.
- (c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.
- (d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.
- (2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.
 - (3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain

why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWP, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

- (4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
- (5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of preconstruction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the

NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see General condition 32).

F. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or

predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under Section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to Section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request maybe a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Protected tribal resources: Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by, or reserved by or

for, Indian tribes through treaties, statutes, judicial decisions, or executive orders, including tribal trust resources.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: Re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b) (1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately. **Single and complete non-linear project:** for non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the

gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or individual; or (2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

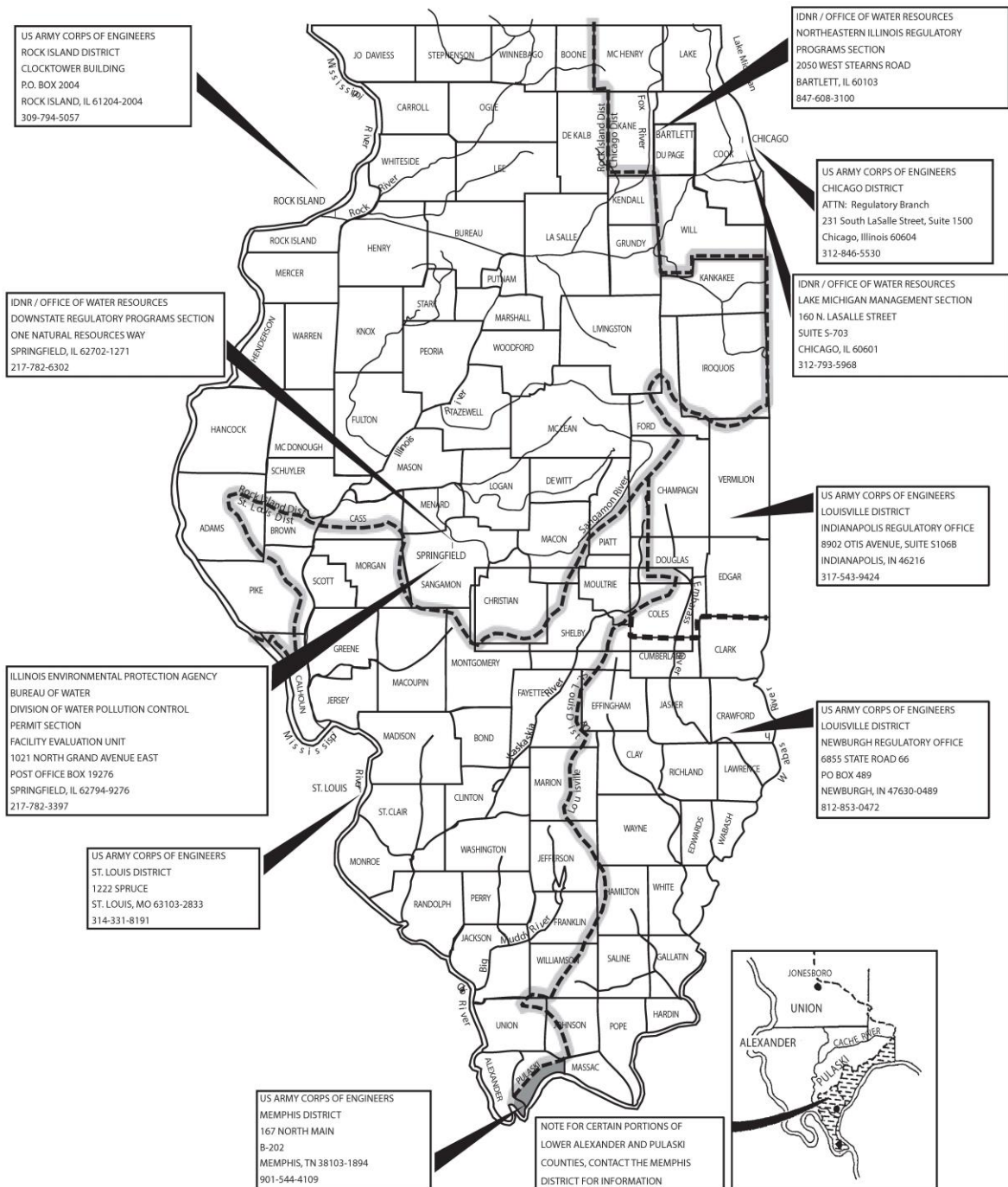
Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

PCN - Pre-Construction Notification

*** Nationwide permit where Illinois Environmental Protection Agency has denied Section 401 Water Quality Certification.

REGULATORY JURISDICTIONAL BOUNDARIES



**STANDARD SPECIFICATION
FOR
SECTION 561. WATER MAIN**

This Standard Specification replaces Section 561 of the Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction", adopted April 1, 2016.

561.01 Description. This work shall consist of constructing a water main in accordance with the City of Decatur Standard Specifications for Water Main Construction.

561.02 Materials.

- (a) Material used for water main (i.e., tees, bends, valves, valve boxes, plugs, caps, sleeves, accessories etc.) shall conform to City of Decatur Specifications for Water Main Construction.
- (b) Polyethylene Encasement. Eight-mil minimum thickness in accordance with AWWA C-105.
- (c) Ductile Iron Pipe. All direct bury and bore and jack water main and fittings shall be cement lined ductile iron pipe Pressure Class 350 Thickness Class 52 in accordance with City Standards and AWWA C-104.
- (d) High Density Polyethylene Pipe. HDPE pipe shall be manufactured from a PE 4710 resin listed with the Plastic Pipe Institute (PPI) in TR-4. The resin material will meet the specifications of ASTM D 3350 with a minimum cell classification of 445474C. Pipe shall have a manufacturing standard of ASTM F 714. Pipe O.D. sizes 4" to 24" shall be ductile iron pipe sizes (DIPS). Pipe shall be DR 11 for pipe sizes up to 24" unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipes shall be suitable for use as pressure conduits, listed as NSF 61, and per AWWA C906 Pressure Class (PC) 160, shall have a nominal burst value of three and one-half times the Working Pressure Rating (WPR) of the pipe. A peak flow water velocity of 5 ft/sec shall be used in the hydraulics engineering design. Pipe shall be blue in color or contain blue striping. Pipe shall be stored and handled as per the manufacturer's recommendations. Coiled pipe will not be allowed.
- (e) Mechanical Joint Adapters to Ductile Iron. Mechanical Joint (MJ) Adapters shall be PE 4710 HDPE, minimum cell classification of 445474C as determined by ASTM D 3350. Mechanical Joint Adapters shall have a pressure rating equal to the pipe unless otherwise specified on the plans. The adaptors shall be designed to be fused to the HDPE pipe and restrained to the Ductile Iron MJ hub. The MJ adapter shall be provided with a stainless steel stiffener insert.

**STANDARD SPECIFICATION
FOR
SECTION 561. WATER MAIN (Continued)
CONSTRUCTION REQUIREMENTS**

561.03 General. The construction of water mains, including protection from sewers, pressure testing, and disinfection, shall be according to the “Standard Specifications for Water and Sewer Main Construction in Illinois,” except as follows:

- (a) **Excavation and Foundation.** This work shall be according to the applicable requirements of Article 550.04 of the Standard Specifications for Road and bridge Construction. Water mains shall have a minimum of 42 inches of cover, unless approved otherwise by the Engineer.
- (b) **Backfilling.** Backfilling methods and materials will be in accordance with City Standards and Article 550.07 of the Standard Specifications. Backfilling Method 1 shall be used within the roadway. Backfilling Method 3 may, subject to the approval of the Engineer, be used outside the limits of the roadway.

Roadside areas disturbed by construction shall be graded to conform with the adjoining ground and seeded in accordance with Section 250. Mulching shall be completed in conformance with Section 251 using Method 2, Procedure 2 described in Article 251.03 of the Standard Specifications.

Established lawn areas disturbed by construction shall be final graded, seeded and mulched after the water main has been installed. Seeding shall be done in conformance with Section 250. Seeding may be done by a broadcast method approved by the Engineer. The seeding mixture shall conform to Class 1, Type Lawn Mixture listed in Article 250.07. Mulching shall be done in conformance with Article 251 using Method 2, Procedure 2 described in Article 251.03.

At locations identified on the plans, sod will be provided and installed on prepared soil in accordance with Section 252.

- (c) All joints shall be restrained using Field Lok Gaskets or approved equal as determined by the Engineer. All fittings shall be restrained using ROMAC Grip Rings or Megalug Series 1100 Mechanical Joint Restraint.
- (d) All Ductile Iron water main pipes shall include polyethylene encasement installed in accordance with AWWA C105, Method A. Any slack in the encasement shall be neatly folded around the pipe and taped flat. Polyethylene encasement shall stop short of hydrants to allow proper draining of the hydrant shoe.
- (e) **Flushing.** The time and procedure for the flushing of new water mains shall be approved by the City’s Water Distribution Supervisor and the Engineer to ensure any special water distribution system considerations are addressed.

**STANDARD SPECIFICATION
FOR
SECTION 561. WATER MAIN (Continued)**

- (f) Valves. The Contractor shall verify, under the control of the Engineer and the City's Water Distribution Supervisor that all new installed valves are in fully operating condition, open and in service unless otherwise specified by the Engineer and the City's Water Distribution Supervisor prior to final acceptance and payment."
- (g) Fire Hydrants. The Contractor shall verify under the control of the Engineer and the City's Water Distribution Supervisor that all new fire hydrants are in proper operating condition prior to final acceptance and payment.

561.04 Hydrostatic Tests. Hydrostatic tests will be performed according to Section 13 of the American Water Works Association Specifications, Designation: AWWA C600 and as may be amended by the City of Decatur. The water main will be subjected to the hydrostatic pressure and leakage tests specified by the water main owner. Water of satisfactory bacteriological quality for drinking purposes for making the hydrostatic and leakage tests will be provided by the City of Decatur at no expense to the Contractor.

561.05 Method of Measurement. This work will be measured for payment in place in feet. The length measured will include stops, fittings, and valves.

Excavation in rock will be measured for payment according to Article 502.12 of the Standard Specifications.

Measurement for payment for trench backfill will be made in accordance with City Standards. Excavation, haunching, and initial backfill quantities will not be measured for payment under or within 2-feet of pavement

Backfill with excavated material, or at locations where excavated material will be allowed, will not be measured separately and shall be include in the contract unit price per foot for DUCTILE IRON PIPE of the size and type specified.

Water main for the specified inside diameters and backfill conditions will be measured for payment in linear feet completed, in place, and accepted. No measurement will be made for water mains installed at a depth greater than the minimum unless so noted on the plans and/or in the specifications.

Water main with trench backfill for the specified inside diameter will be measured for payment in linear feet completed, in place and accepted, inclusive of the trench backfill material. No measurement will be made for water mains installed at a depth greater than the minimum unless so noted on the plans and in the specifications.

Water main fittings of the specified size/diameter will be measured for payment as each fitting completed, in place and accepted.

**STANDARD SPECIFICATION
FOR
SECTION 561. WATER MAIN (Continued)**

561.06 Basis of Payment. Work will be paid for as follows:

Trench backfill will include all labor and materials necessary to comply with this specification will be paid for at the contract unit price per TON for TRENCH BACKFILL and no additional compensation will be paid.

Water main will be paid for at the contract unit price per FOOT for PIPE of the specified inside diameter. Said unit price will include all labor, equipment and material to saw cut the existing pavement, excavate, prepare the trench, lay the pipe, install polywrap, backfill with approved material and compact the trench to the top of the subgrade or adjacent ground. No payment will be made for water mains installed at a depth greater than the minimum unless so noted on the plans and in the specifications.

Water main requiring trench backfill will be paid for at the contract unit price per FOOT for Pipe of the specified inside diameter. Said unit price will include all labor, equipment and material to saw cut the existing pavement, excavate, prepare the trench, lay the pipe, install polywrap, backfill with specified material and compact the trench to the finished subgrade or adjacent ground. No payment will be made for water mains installed at a depth greater than the minimum unless so noted on the plans and in the specifications.

Fittings (i.e., tees, bends, valves, valve boxes, plugs, caps, tap and sleeves and mechanical joints, field lock gaskets, grip rings) will be paid for at the contract unit price EACH for the specific fitting of the specified diameter or size. Said unit price will include all labor, equipment, and material to excavate, install the fitting, construct thrust block(s), backfill and compact to finished subgrade.

Fire hydrants will be paid for at the contract unit price per EACH for FIRE HYDRANT. Said unit price will include all labor, equipment, and material to: excavate, prepare the trench bedding, install the new hydrant, installing 1" washed stone for the drain field, associated fittings, extensions, thrust blocks, adjust hydrant and box to match existing grade, backfill and compact around the hydrant and dispose of waste and surplus material.

**END OF STANDARD SPECIFICATION
FOR
WATER MAIN**

**STANDARD SPECIFICATION
FOR
HORIZONTAL DIRECTIONAL DRILLING**

- 1.01 Description.** This work will consist of providing all labor, materials, and equipment necessary to complete the installation of a High Density Polyethylene (HDPE) or Ductile Iron Pipe (DIP) water main by directional drilling methods.
- 2.01 Submittals.** The contractor shall provide the Engineer with shop drawings for all materials, equipment, drilling fluids, and a detailed boring plan as described in 5.01-C.
- 2.02 Qualifications.** The directional drilling contractor shall have a minimum of five (5) years experience in this work and shall have installed at least 25,000 feet of pipe with one directionally drilled pipe at least as large as 12” in diameter, and having performed creek or river crossings of at least 1,000 feet in length. The contractor shall have personnel experienced with the fusing process and shall provide a copy of certification from the pipe manufacturer.
- 3.01 Materials.** The materials shall conform to the following.
- A. **HDPE Pipe** - Pipe shall be manufactured from a PE 4710 resin listed with the Plastic Pipe Institute (PPI) in TR-4. The resin material will meet the specifications of ASTM D 3350 with a minimum cell classification of 445474C. Pipe shall have a manufacturing standard of ASTM F 714. Pipe O.D. sizes 4” to 24” shall be ductile iron pipe sizes (DIPS). Pipe shall be DR 11 for pipe sizes up to 24” unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipes shall be suitable for use as pressure conduits, listed as NSF 61, and per AWWA C906 Pressure Class (PC) 160, shall have a nominal burst value of three and one-half times the Working Pressure Rating (WPR) of the pipe. A peak flow water velocity of 5 ft/sec shall be used in the hydraulics engineering design. Pipe shall be blue in color or coextruded blue striping in the outside surface. Pipe shall be stored and handled as per the manufacturer’s recommendations. Coiled pipe will not be allowed.
 - B. **Ductile Iron Pipe** - All ductile iron pipe shall be in accordance with the City’s Standard Specifications for Water Main Construction included in Appendix A. Ductile iron pipe shall be Thickness Class 52 and shall include polyethylene encasement and installed in accordance with AWWA C 105, Method A. Slack in the encasement shall be neatly folded around the pipe and taped flat.
 - C. **HDPE Mechanical Joint Adapters to Ductile Iron** - Mechanical Joint (MJ) Adapters shall be PE 4710 HDPE, minimum cell classification of 445474C as determined by ASTM D 3350. Mechanical Joint Adapters shall have a pressure rating equal to the pipe unless otherwise specified on the plans. The adaptors shall be designed to be fused to the HDPE pipe and restrained to the Ductile Iron MJ hub. The MJ adapter shall be provided with a stainless steel stiffener insert.

**STANDARD SPECIFICATION
FOR**

HORIZONTAL DIRECTIONAL DRILLING (continued)

- D. **Tracer Wire for HDPE Pipe** – Contractor shall provide a continuous length of blue #12 THHN or larger tracer wire with all non-ferrous piping. Contractor shall provide sufficient protection of wire during the boring process to guarantee a continuous wire. Protection may include but is not limited to attaching multiple wires with the pull or providing HDPE conduit with the host pipe. Wire will not be considered approved until a continuity test has been performed.

At all connections at tees, crosses and locations where the tracer wire will be brought to the surface, a direct bury lug shall be provided. Termination boxes with blue marker posts shall be provided if the tracer wire is not extended to a vault, valve box, or hydrant. When used, the marker post will be approximately 4.5 feet high and labeled to mark the water main and termination box location. The termination box and marker post shall be approved by the engineer.

- 4.01 Joining HDPE Pipe Sections-** Sections of HDPE pipe shall be joined into continuous lengths on the jobsite above ground. The joining method shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. The butt fusion equipment used in the joining procedures should be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, temperature requirements of 400-450 degrees Fahrenheit, alignment, and an interfacial fusion pressure of 75 PSI. The butt fusion joining will produce a joint with weld strength equal to or greater than the tensile strength of the pipe itself. All welds will be made using a Data Logger to record temperature and fusion pressure. A graphic representation of the fusion cycle shall be part of the Quality Control record. All connection methods and processes shall be to the approval of the Engineer. Socket fusion, hot gas fusion, threading, solvents, and epoxies will not be allowed to join HDPE pipe.
- 4.02 Joining Ductile Iron Pipe Sections-** Pipe lengths shall be connected together in one length if space permits. All joints shall be boltless, flexible, and restrained in strict accordance with the manufacturer's recommendations for directional drilling operations.

CONSTRUCTION REQUIREMENTS

5.01 Installation.

- A. The Contractor shall install the identified pipelines by means of horizontal directional drilling. The Contractor shall assemble, support, and pretest the pipeline prior to installation in the directional drill tunnel. The Engineer must be notified 48 hours in advance of starting work.

**STANDARD SPECIFICATION
FOR
HORIZONTAL DIRECTIONAL DRILLING (continued)**

- B. Prior to beginning work, the Contractor shall submit to the Engineer a comprehensive and realistic work plan detailing the procedure and schedule to be used to execute the project. At a minimum, the work plan shall include:
1. A description of all equipment to be used,
 2. A list of personnel and their qualifications and experience, including back-up personnel,
 3. A list of subcontractors,
 4. A schedule of work activity,
 5. A safety plan that includes MSDS of any potentially hazardous substances to be used,
 6. A traffic control plan,
 7. An environmental protection plan and contingency plans.
- C. The entire drill path shall be accurately surveyed with entry and exit stakes placed at the appropriate locations within the area indicated on drawings. If the contractor is using a magnetic guidance system, the drill path shall be surveyed for any surface geomagnetic variations or anomalies.
- D. Horizontal directional drilling shall consist of drilling a small diameter pilot hole from one end of the alignment to the other, followed by enlarging the hole diameter for the pipeline insertion. The exact method and techniques for completing the directionally drilled installation will be determined by the Contractor, subject to the requirements of these Specifications.
- E. Upon completion of the pilot hole, an “as built” record shall be submitted to the Engineer with the directional survey information plotted on the plan and profile drawing. The hole enlarging phase will not begin until after approval of the pilot hole location.
- F. The Contractor shall prepare and submit a written plan to the Engineer for approval for the insertion of the pipe into the opened bore hole. This plan shall include pullback procedure, ballasting, use of rollers, side booms and side rollers, coating protection, internal cleaning, internal gauging, hydrostatic tests, dewatering, and purging.
- G. The required piping shall be assembled in a manner that does not obstruct adjacent roadways, driveways or other public and private activities. The Contractor shall erect temporary fencing around the entry and exit pipe staging areas.
- H. Reaming operations shall be conducted to enlarge the pilot after acceptance of the pilot bore. The number and size of such reaming operations shall be conducted at the discretion of the Contractor. Maximum reaming size shall be no more than 1.5 times the O.D. of the pipe unless approved by the Engineer.

**STANDARD SPECIFICATION
FOR
HORIZONTAL DIRECTIONAL DRILLING (continued)**

- I. The maximum allowable pull exerted on the pipelines shall be measured continuously and limited to the maximum allowed by the pipe manufacturer so that the pipe or joints are not over stressed.
- J. A swivel shall be used to connect the pipeline to the drill pipe to prevent torsional stresses from occurring in the pipe.
- K. The pipelines shall be adequately supported by rollers and side booms and monitored during installation so as to prevent over stressing or buckling during the pullback operation. Such support/rollers shall be spaced close enough together to prevent excessive sagging of pipe. The rollers will be comprised of a non-abrasive material arranged in a manner to provide support to the bottom and bottom quarter points of the pipeline allowing for free movement of the pipeline during pullback. Surface damage shall be repaired by the Contractor before pulling operations resume.
- L. After the pipe is in place, cleaning pigs shall be used to remove residual water and debris. After the cleaning operation, the Contractor shall provide and run a sizing pig to check for anomalies in the form of buckles, dents, excessive out-of-roundness, and any other deformations. The sizing pig run shall be considered acceptable if the survey results indicate that there are no sharp anomalies (e.g. dents, buckles, gouges, and internal obstructions) greater than 2 percent of the nominal pipe diameter, or excessive ovality greater than 5 percent of the nominal pipe diameter. For gauging purposes, dent locations are those defined above which occur within a span of five feet or less. Pipe ovality shall be measured as the percent difference between the maximum and minimum pipe diameters. For gauging purposes, ovality locations are those defined above which exceed a span of five feet.

6.01 Environmental Protection.

- A. The Horizontal Directional Drilling operation is to be conducted in a manner to eliminate the discharge of water, drilling mud and cuttings into the adjacent creek or land areas involved during the construction process. The Contractor shall provide equipment and procedures to maximize the recirculation or reuse of drilling mud to minimize waste. All excavated pits used in the drilling operation shall be lined by the Contractor with heavy duty plastic sheeting with sealed joints to prevent the migration of drilling fluids and/or ground water. Equipment (graders, shovels, etc.) and materials (such as vacuum trucks, groundsheets, hay bales, booms, and absorbent pads) for cleanup and contingencies shall be provided in sufficient quantities by the Contractor and maintained at all sites for use in the event of inadvertent leaks, seeps or spills. All waste material shall be collected and removed from the site for proper legal disposal by the Contractor.

**STANDARD SPECIFICATION
FOR**

HORIZONTAL DIRECTIONAL DRILLING (continued)

- B. Additives to drilling fluid such as drill soap, polymers, etc. shall be environmentally safe and be approved for such usage. No diesel fuel shall be used.
- C. Pits constructed at the entry or exit point area shall be so constructed to completely contain the drill fluid and prevent its escape to the creek.
- D. All drilling operations shall be performed by supervisors and personnel experienced in horizontal directional drilling. All required support, including drilling tool suppliers, survey systems, mud cleaning, mud disposal, and other required support systems used during this operation shall be provided by the Contractor.
- E. The Contractor shall visit the site and must be aware of all site constraints at the directional drill crossing and provide the Engineer with a drilling plan outlining procedures to prevent drilling fluid from adversely affecting the surrounding area.
- F. Any on-site treatment of water shall satisfy regulatory agencies before it is discharged.

7.01 Basis of Payment. Payment for all labor, material, and equipment necessary to install the HDPE or Ductile Iron pipe shall be paid at the contract unit price per LINEAL FOOT, for WATER MAIN DIRECTIONAL BORED of the size and pipe type specified herein. Measurement for the horizontally directional drilled pipe will be from end to end of the completed pipe in place.

Payment for all labor, material, and equipment necessary to install the HDPE to Ductile Iron pipe connection shall be paid at the contract unit price per EACH, for HDPE to DIP COUPLING and DIP REDUCER of the size and type specified.

The price for WATER MAIN DIRECTIONAL BORED, HDPE TO DIP COUPLING, and DIP REDUCER shall be complete in place, and shall include the price for the pipe, flexible restrained joints, mechanical joint adaptors, tracer wire, termination boxes, submittals, and all other items necessary for construction as shown on the drawings and/or described in the specifications and no additional compensation will be paid.

**END OF STANDARD SPECIFICATION
FOR
HORIZONTAL DIRECTIONAL DRILLING**

APPENDIX A

**STANDARD SPECIFICATIONS
FOR
WATER MAIN CONSTRUCTION**



Revised: January 2018

CITY OF DECATUR, ILLINOIS
STANDARD SPECIFICATIONS FOR WATER
MAIN CONSTRUCTION

MATERIALS

DUCTILE IRON PIPE

Ductile iron pipe shall be designed in accordance with ANSI A21.50 (AWWA C150 - latest revision) using 60,000 psi tensile strength, 42,000 psi yield strength and 10% elongation. All pipe shall have a minimum Class pipe as shown below, 3-1/2 feet to 6 feet cover, trench condition 1, flat bottom, no blocks on tamped backfill, and at least 100 psi water hammer allowance and 2 to 1 factor of safety.

Pipe shall have a standard pipe coating outside and be lined with **thin cement lining and seal coated inside in accordance with ANSI A21.4 - latest revision** (AWWA C104 - latest revision) wherever applicable and as further specified herein.

Minimum wall thickness shall conform to the following:

<u>SIZE</u>	<u>CLASS</u>	<u>METAL THICKNESS</u> (INCHES)
6" Ductile Iron	52	0.31
8" Ductile Iron	52	0.33
10" Ductile Iron	52	0.35
12" Ductile Iron	52	0.37
14" Ductile Iron	52	0.39
16" Ductile Iron	52	0.40
18" Ductile Iron	52	0.41
20" Ductile Iron	52	0.42
24" Ductile Iron	52	0.44

The pressure rating, metal thickness class, net weight of pipe without lining, length of pipe and name of manufacturer shall be clearly marked on each length of pipe.

All pipe, fittings and glands shall be completely coated outside with coal tar pitch varnish to which sufficient oil has been added to make a smooth coating, tough and tenacious when cold, not "tacky" and not brittle.

All pipe shall be new and secured from responsible manufacturers.

Any pipe delivered along the line of the improvement that is broken or damaged will be rejected.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

DUCTILE IRON FITTINGS

Fittings 6 inches to 12 inches shall be Mechanical Joint type and shall be Class 350 ductile iron in accordance with ANSI A21.10 - latest revision (AWWA C110 - latest revision) where applicable as to thickness and radius of curvature, but not as to length. Cement linings shall be standard thickness. 14" through 36" shall be Class 250 ductile iron.

Fittings in sizes 6 inches to 24 inches inclusive shall conform to ANSIA21.10 - latest revision (AWWA C110 - latest revision). All fittings shall be new and secured from responsible manufacturers. Fittings shall be cement-mortar lined and coated with an asphaltic material inside and outside in accordance with ANSI/AWWA A21.4/C104

At the proposed locations where a tee is to be installed with a line valve, a mechanical joint fire hydrant anchoring tee with rotating gland shall be installed in the main line to secure the valve.

Stainless steel tapping sleeves may be considered for use in some cases and shall be Mueller H-304 or equal. This generally will be when a small size tap (6 inches to 12 inches) is to be made to a large main (24 inches or larger). The bolts and nuts shall be Corten, stainless steel or other acceptable non-corrosive material. The sleeve shall be of a minimum two piece construction and compatible with a Mueller tapping valve.

The contractor must submit specifications and any pertinent information (location, reason, etc.) to the Director of Public Works for approval prior to installation.

JOINT ACCESSORIES

Mechanical joint pipe, fittings, and other appurtenances shall be furnished according to ANSI A21.11 - latest revision (AWWA C111 - latest revision) and furnished complete with mechanical joint accessories. The bolts and nuts to be alloy steel (Corten type such as US alloy). Gaskets to be made of plain rubber with 70-75 durometer.

Push-On type pipe and fitting joints shall be furnished with two silicon bronze serrated wedges or conductive gaskets at each joint. The wedges shall be installed at 180 degree intervals after the joint is completed.

SLEEVE

Sleeves shall be Series RS3800 Restrained Sleeve manufactured by EBAA Iron.

GRIP RING ACCESSORY KIT

Grip Ring Accessory Kit shall be manufactured by Romac Industries, Inc.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

VALVES

All valves shall be AWWA Resilient-Wedge type gate valves and shall equal or exceed the AWWA C509 - latest revision standard. The valves shall be ductile iron body, bronze mounted, with non-rising stem.

All valves through 12 inches in size shall have a working pressure rating of 200 psi with a test pressure of 400 psi. Valves larger than 12 inches shall have a working pressure rating of 150 psi with a test pressure of 300 psi. All valves shall be provided with a 2 inch operating nut which opens to the right (clockwise).

Gate valves shall be provided with two "O" ring stem seals. One "O" ring shall be located below the thrust collar. The space between the "O" rings and around the thrust collar shall be filled with a lubricant to provide for thrust collar lubrication each time the valve is operated.

The interior of the valve body shall be free of pockets or ledges where sediment or debris can collect and shall be bubble tight at 200 psi working pressure in either direction and with the valve in any position.

The "O" ring stem seal(s) shall be replaceable with the valve under "working" pressure.

The valve shall have a full size unobstructed waterway capable of passing a full sized shell cutter equal to the nominal diameter of the tapping valve.

The valve body and bonnet shall be coated on all exterior and interior surfaces with a bonded epoxy coating conforming to the requirements of AWWA C116 - latest revision - Protective Fusion-Bonded Epoxy Coatings for the Interior Surfaces of Ductile-Iron and Grey-Iron Fittings.

Valves shall be furnished with mechanical joint end connections with gaskets. All valves shall be coated in conformance to AWWA Standard C-116, latest revision. Interior wetted ferrous surfaces shall be coated a nominal 10 mils thick for long life; and body exterior shall have a minimum 3 to 4 mils coating thickness in order to provide protection in shipment and storage.

All valves shall have the name of the manufacturer and year of manufacture clearly cast on the valve body. They shall be new and secured from a responsible manufacturer.

Tapping valves shall be of the same type as specified above, except they shall be provided with the AWWA standard tapping valve flange on one end to correspond with the tapping sleeve outlet flange. Tapping sleeves shall be of a class equal to that specified for "DUCTILE IRON PIPE FITTINGS".

All valves shall be new and secured from responsible manufacturers and use of valves other than specified above must receive written approval from the Director of Public Works not later than twenty-four (24) hours prior to bid opening.

Valves and fittings shall be set on a foundation or footing of concrete laid on firmly compacted ground. The foundations shall be solid concrete block(s) not less than 8" X 8" X 16" for 6" and 8" water mains and a minimum of 2 - 8" X 8" X 16" solid concrete blocks for 10" and larger water mains. Leveling shims shall be of hard wood material.

The elevation of the valves and fittings and their foundations shall be such as to conform to the height of the connecting pipe so there will be no strain on the joints.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

VALVE BOXES

Cast iron valve boxes shall be provided for all valves. The valve boxes shall be provided with adjustable top boxes approximately 5 inches in diameter so constructed that the removable cover will not be thrown out by travel over it. Boxes shall be provided with a hood at the base of the lower section to relieve any strain on the valve bonnet. They shall extend from 36 inches to 54 inches unless otherwise specified. The valve boxes shall be new and secured from responsible manufacturers.

Valve boxes shall be set so that the base will be two (2) inches or more above the flanged joints of the valve dome. The nut of the valve shall be in line with the hub or upper part of the valve box base where it is connected with the upright jacket. After the valve boxes have been placed in proper position, they shall be backfilled with appropriate material and thoroughly hand tamped up to the surface of the ground. In no case shall the boxes be allowed to shift from a perpendicular position.

FIRE HYDRANTS

All fire hydrants shall equal or exceed the AWWA C502 - latest revision standard. They shall be of the compression type with the main valve closing with the pressure. They shall be of the dry barrel, dry top design.

The hydrant body shall be cast of ASTM A-126 Grade B gray iron with all interior parts fully bronze mounted, including a permanent bronze bushing threaded and locked into the shoe casting providing bronze to bronze threads between the seat ring and shoe for easy removal of the main valve assembly.

Hydrants shall be of the "breakable" type so designed that neither the barrel nor stem shall be damaged on impact and so designed that repairs may be effected by easily replaceable components.

The hydrant shall have only one flange above ground line secured with a traffic model breakable safety flange that will break clean on vehicular impact. The breaking point of the stem coupling shall be below the flange so that a tire cannot depress the stem and open the main valve.

The hydrant bonnet assembly shall be provided with an integral lubricant reservoir so designed that operating nut threads, stem threads, and thrust collar are automatically lubricated each time the hydrant is operated. The lubricant reservoir, stem threads, and operating nut shall be sealed from the waterway by two (2) "O" ring stem seals bearing on a bronze bushing near the top of the stem. The lubricant reservoir and operating nut shall also be sealed to the atmosphere to prevent leakage of lubricant and contamination of lubricant by the elements.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

Hydrants shall have a specially molded rubber main valve which shall seat against an ASTM B-62 bronze seat ring with an inside diameter of 5-1/4 inches. The main valve assembly shall include two integral drain valves which operate automatically each time the hydrant is opened or closed with no toggles, springs, and adjustable mechanisms. There shall be at least two bronze lined drain ports located in the hydrant shoe.

Hydrants shall be furnished with two 2-1/2-inch hose nozzles and one 4-inch pumper nozzle. Pumper nozzle to face the street. All nozzle threads shall be National Standard Threads. They shall be furnished with a pentagon-shaped 1-1/4-inch bronze operating nut with an approved weather cap. All hydrants shall be opened by turning right (clockwise).

Each fire hydrant shall be installed using an auxiliary valve that is tied to the main line through the use of a mechanical joint hydrant tee with rotating gland. The fire hydrant valve and line shall be 6 inches. The auxiliary valve and required box shall be specified under "VALVES AND VALVE BOXES". The fire hydrant shall be installed using a "6 INCH ANCHOR COUPLING" and, if needed, a "XX INCH FIRE HYDRANT LIFT KIT". The contractor may substitute "6 INCH POLYWRAPPED DIP and 6 INCH OFFSET NIPPLE" for the "6 INCH ANCHOR COUPLING and XX INCH FIRE HYDRANT LIFT KIT".

Hydrants shall be furnished with Mechanical Joint inlet (shoe) connection and shall be sized for a minimum bury (trench) depth of 4-1/2 feet.

The Mueller Centurion Model A423 (preferred) or the Modern Centurion Model A442 are approved hydrants.

Use of Hydrants other than as specified above, must receive written approval from the Director of Public Works a minimum of twenty-four hours prior to bid opening.

Fire Hydrants shall be set in such a manner that the steamer connection is facing the closest street. They shall be set vertically upon a solid concrete block not less than 8" X 8" X 16" (See Standard #4000).

Hydrants shall be set with solid concrete blocking (8" X 8" X 16"), placed behind the barrel and behind the tee connection between the water main and the hydrant lead to prevent movement of the pipe or hydrant (See Standard #4000). Poured concrete blocking is allowed, but only with the approval of the Engineer. When shims are required, they shall be hard wood shims.

To provide adequate drainage, the base of the hydrant shall be enclosed with a vault built of brick, constructed to allow an eight (8) inch clearance around the base and tapered so as to fit closely around the barrel of the hydrant just above the lower flange. Drain field using 1" washed stone is an approved equal to the brick vault. Use 1" washed river rock.

After fire hydrants have been set, backfilled and tested, the surfaces of the hydrant above the ground line shall be cleaned by wire brushing and washing with soap and water, and the exposed surfaces shall be painted with one (1) coat of Valspare Syn-Gard,

WATER SERVICE LINES

Water Service Lines shall be installed using one of the following Types:

- | | |
|----------|--|
| Type I | A new service from ductile iron main to curb box with no connection to an existing line. |
| Type II | A new service from ductile iron main to curb box with connection to an existing line. |
| Type III | A new service from a PVC main to curb box with no connection to an existing line. |

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

Type IV A new service from a PVC main to curb box with connection to an existing line.

The above listed types shall be installed per Chapters 64 and 75 of the City Code, City Construction Standard 4040 and as follows:

The new domestic water service shall not be installed until the new main has been placed in service.

Stops, boxes and copper pipe shall be new.

When the existing house service is near the new curb box, the old curb box and curb stop shall be removed and the existing house service shall be connected to the new curb box.

When the existing curb box is inaccessible from the street side of the property (existing line coming from alley) or if the property is an empty lot, the contractor shall install the new service line at the location marked by the City or its representative. Connection to the existing service will not be required.

All service taps to PVC or HDPE mains require the use of a bronze service saddle per Section 3 of Chapter 75 of the City Code. The drilling operations shall be done per the PVC manufacturer's specifications.

The following is a list of approved stops, boxes and saddles for water service installations. Others may be used, but only with written approval of the Director of Public Works at least five (5) working days prior to the scheduled bid opening.

Corporation Stops – Mueller H-15008N

Curb Stops – Mueller H-15155N or B-25155N

Curb Boxes – Mueller H-10300 or H-10300-99008

Service Saddle – Mueller BR2B Series, Polywrap required for PVC Pipe

The copper service line used between the main and curb box shall meet the specifications for seamless copper tubing, ASTM, designation B88, Type K.

The installation shall be in accordance with the City Code, Construction Standard 4040, Section 562 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction latest revision, and specifications contained herein.

The water service line shall be laid sufficiently and placed in a manner as to prevent rupture or breakage from the settling of the ground.

POLYETHYLENE ENCASED WATER MAINS

This work shall comply with ANSI/AWWA C-105/A21.5 (latest revision.)

All pipe, fittings and appurtenances such as valves, tees tapping saddles and crosses shall be polyethylene encased when they are installed within the area requiring such encasement.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

INSTALLATION METHODS

PROTECTION OF WATER MAINS

Water mains and water service lines shall be protected against entrance of hydrocarbons through diffusion through any material used in construction of the line.

HORIZONTAL SEPARATION

- A. Whenever possible, the water main shall be laid at least ten (10) feet horizontally from any existing or proposed drain or sewer line.
- B. Should the local conditions prevent a lateral separation of ten (10) feet, a water main may be laid closer than ten (10) feet, or in the same trench, with a storm or sanitary sewer; provided the main is laid in a separate trench; or on an undisturbed earth shelf located to one side of the sewer and at such an elevation that the bottom of the water main is at least eighteen (18) inches above the top of the sewer.
- C. If it is impossible to obtain proper horizontal and vertical separation as stipulated in (A) or (B), both the water main and sewer shall be constructed of mechanical joint, ductile iron pipe and be pressure-tested to assure water tightness before backfilling.
- D. Water mains shall be separated from septic tanks disposal fields and seepage beds by a minimum of twenty-five (25) feet.

VERTICAL SEPARATION

- A. Whenever water mains must cross house sewers, storm drains, or sanitary sewers, the water main shall be laid at such an elevation that the bottom of the water main is eighteen (18) inches above the top of the drain or sewer. This vertical separation shall be maintained for that portion of the water main located within ten (10) feet, horizontally of any sewer or drain crossed, said ten (10) feet to be measured as the nominal distance from the water main to the drain or sewer
- B. Where conditions exist that the minimum vertical separation set forth in (A) cannot be maintained, or if it is necessary for the water main to pass under a sewer or drain, both the sewer and the water main shall be laid with mechanical joint, ductile iron pipe; and the mechanical joint pipe shall extend on each side of the crossing until the nominal distance from the water main to the sewer or drain line is at least ten (10) feet.

As an alternate, either the water main or the sewer could be installed inside a carrier pipe which would extend at least ten (10) feet on each side of all crossings.

In making such crossings, it is preferable to center a length of water main pipe over the sewer to be crossed so that the joints will be equidistant from the sewer and as remote there from as possible. Where a water main must cross under a sewer, a vertical separation of eighteen (18) inches between the bottom of the sewer and the top of the water main shall be maintained, along with means to support the sewer lines to prevent their settling.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

EARTH EXCAVATION

The trenches shall have a minimum width of twelve (12) inches plus the diameter of the water main to be laid therein, and of such a depth that there shall be a minimum of three (3) feet six (6) inches of cover, measured from the surface of the street or natural ground to the top of the pipe.

The excavated material shall be deposited on the side of the trenches and beyond the reach of slides and the banks trimmed up so as to be of as little inconvenience as possible to public travel or occupants of adjoining property. In case it is necessary to place excavated material on any sidewalk or pavement, barriers shall be erected to keep the material at least four (4) feet from the front of buildings and from the inner portion of the sidewalk or pavement. When it is necessary to deposit excavated materials on grass plots, it shall be removed in such a manner as to cause as little damage as possible to the grass. Any damage shall be repaired by the contractor at his own expense.

All pavements, sidewalks, driveways, culverts, curbs, curb and gutters, cross walks or similar obstructions which interfere with the construction work must be tunneled under or removed to the width of the trench before the excavation is made. All materials unsuitable for backfilling must be kept separate from other excavated materials and disposed of as directed by the Engineer, at the contractor's expense.

In case the character of the ground requires it, to protect the work, the street or the workmen, the side of the trenches shall be supported with suitable bracing and sheeting. Where the ground is sufficiently firm, the pipe may be laid directly on the bottom of the trench, but wherever soft or unsuitable ground is encountered, or wherever trenches are excavated through cinder fills or other unsuitable material, the Engineer may require that the trench be excavated to an additional depth of six (6) inches and clean sand, crushed rock or selected earth, as directed by the Engineer, shall be tamped into the trench for minimum thickness of six (6) inches below the bottom of the pipe.

The trenches shall be kept free of water during the progress of the work. All tools and equipment for pumping and bailing and all materials for building drains or other work necessary to keep the trenches free of water shall be furnished by the contractor. This work and equipment shall be considered incidental to the contract and no extra compensation will be allowed.

All sewer, water, gas and other pipes or conduits and service connections encountered shall be carefully supported and protected from damage while the excavations are being made and backfilling finished.

CITY UTILITY LOCATION

It shall be the contractor's responsibility to locate existing water services. Where there is reasonable assurance a City utility exists (storm sewer, sanitary sewers, water mains and/or other City services), but cannot otherwise be located, the contractor, at the engineer's direction, will excavate to locate said utility before construction reaches that area. This will usually require digging in the street/boulevard and the Engineer shall be present when such exploration is done. Trench backfill will be used when directed by the Engineer.

This work will in no way relieve the contractor of his obligation to contact JULIE for the location of other utilities.

**STANDARD SPECIFICATIONS FOR WATER
MAIN CONSTRUCTION**

PIPE LAYING

Water main pipe shall be handled and installed per ANSI/AWWA C600 (latest revision) and by the following additions:

Pipe shall be handled by mechanical equipment or other approved means. Handling of pipe by means of hooks at both ends of the pipe will not be allowed.

All pipe and fittings shall be thoroughly cleaned by brushing with a wire brush at joints and by swabbing the pipe interior.

Pipe shall be laid on a firm bed and as straight as possible. Excavation must be made under the bell of each pipe so the entire length of pipe will lay on the bottom of the trench and the pipe weight will not rest on the bell.

In laying mechanical joint pipe, all surfaces which come in contact with the rubber gasket seals shall be thoroughly brushed with a wire brush and just prior to slipping the gasket over the spigot end and into the bell, all surfaces including the gasket, shall be thoroughly cleaned with soap and water. The gland and gasket shall then be placed on the spigot end and the pipe inserted in the bell.

The gasket shall then be pushed into position and evenly seated, the gland shall be placed in position, the bolts inserted and the nuts tightened.

When tightening bolts, the gland shall be brought up toward the pipe flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. This shall be done by partially tightening the bottom bolt first, then the top bolt, next the bolts on either side, and last the remaining bolts. This cycle shall be repeated until all bolts are within the following range of torque:

BOLT SIZE INCHES	RANGE OF TORQUE FT. - LB.
5/8	40 - 60
3/4	60 - 90
1	70 - 100
1-1/4	90 - 120

The above torque loads shall be applied with torque measuring wrenches.

In laying "Push-On" pipe, the bell socket and the plain end of the entering pipe must be absolutely clean and free of foreign matter prior to the seating of the gasket. The gasket shall be wiped clean, flexed, and then placed in the socket with the large round end entering first, so that the gasket is seated evenly around the inside of the socket with the groove fitted over the bead. As the gasket fits snugly in the gasket seat it may be necessary to smooth out the gasket around the entire circumference to remove any bulges which might interfere with the proper entry of the spigot end.

A thin film of lubricant shall be applied to the inside surface of the gasket which will come in contact when entering the plain end of the pipe. In some cases it is desirable to apply a thick film of lubricant to the outside of the plain end for about one inch back from the end. Lubricant other than that furnished with the pipe shall not be used.

The plain end of the pipe shall be aligned and carefully entered into the socket until it just makes contact with the gasket.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

Joint assembly shall then be completed by forcing the plain end of the entering pipe past the gasket until it makes contact with the bottom of the socket. The first painted stripe shall be inside the socket and the front edge of the second stripe shall be approximately flush with the bell face. If the assembly is not accomplished with the application of reasonable force, the plain end of the pipe shall be removed to check for the proper positioning of the gasket. After proper assembly, the bronze serrated wedges shall be installed as described under "**JOINT ACCESSORIES.**"

Installation of restrained joint pipe, when required, shall be the same as "push-on" pipe with the following additions:

The length of restrained joint pipe required each side of a bend or fitting is a function of the pipe size, internal pressure, depth of cover and the characteristics of the soil. Because of all these variables, the amount of restrained joint pipe at each fitting shall be shown on the plans or described in the special provisions of the contract documents. Normally, the City asks the contractor to install two fieldlock gaskets before and after any fitting.

Restrained joint pipe is a special push-on or mechanical joint pipe that is designed to provide longitudinal restraint without the aid of thrust blocks, although thrust blocking may still be required. U.S. Pipe's TR Flex or Clow's Super-lok joint pipe are examples of this type of restrained joint pipe.

Trench water shall be kept out of the pipe and the pipe kept closed by means of test plugs whenever the work is not in progress.

Caps or plugs shall be put on all open ends of pipe, open bends, open tees, or crosses. Pipe laid adjacent to curbs and on all unsupported changes of direction, all tees, crosses, and other fittings receiving right angle or diagonal thrusts, and all plugs at blanked openings shall be firmly backed against solid earth with suitable masses of concrete of a thickness equal to the pipe diameter and of a length to reach from end to end. Solid concrete blocks 8" X 8" X 16" shall be used for blocking. Poured Portland Cement Concrete blocking shall be used only with the approval of the Engineer.

All connections with existing mains and adjustments of existing mains and service lines shall be made. Any special fittings, plugs, or similar appurtenances necessary to complete the work shall be furnished by the contractor at no additional cost.

All required connections to existing water mains or services shall be completed so that no service or existing water main shall be left open and unconnected at the close of a working day.

POLYVINYL CHLORIDE (PVC) PRESSURE PIPE

All 6 inch through 12 inch PVC pipe shall meet the requirements of AWWA C900 (latest revision), "Polyvinyl Chloride (PVC) Pipe" for pressure Class 150, DR18 PVC pipe with ductile iron pipe equivalent outside diameters.

The pipe shall be laid in accordance with the pipe manufacturer's specifications, AWWA C-605 (Latest Revision) and/or the pipe laying specifications contained herein, whichever is more restrictive.

Where fittings are required, ductile iron fittings shall be used. All ductile iron fittings and tapping saddles used with PVC pipe shall be wrapped with polyethylene as described elsewhere in this document and shall be incidental to the contract.

The joints shall be elastomeric-gasket bell ends meeting the requirements of AWWA C900.

PVC pipe will only be used with the permission of the Director of Public Works.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

A Blue #12 THHN tracer wire shall be laid with all PVC pipe. The main tracer shall be continuous throughout. When the main tracer must be spliced with a new spool, the connection shall be with a "Kernie" wire connector. This being a screw down clamp. At each fire hydrant and house service, a #12 THHN service wire shall be connected to the main tracer and to the fire hydrant or house service.

The connection at the main tracer shall be with a 3M #562 (yellow) plastic self stripping pigtail connector. At the hydrant shoe or house service tapping saddle, the connection may be done with a brass pipe, or grounding, clamp with brass screws, or similar device approved by the engineer.

All connections shall be taped and moisture sealed with electrical mastic and Scotch #2210 E-2 seal.

THRUST BLOCKS AND THRUST COLLARS

When required, thrust blocks and/or thrust collars shall be constructed per City Construction Standards 4020, 4021 and 4021A.

When using standard 4021A, the following materials will be used:

1. Class SI concrete shall be used.
2. #5 reinforcement bars shall be used as shown on the standard.
3. 16-gauge sheet metal plates cut to size as shown on the standard.

The following methods of construction will be followed:

1. The contractor shall follow the standard dimensions as close as possible, but in no case will a smaller dimensioned block be acceptable.
2. The bottom of the foundation for the block shall be clean and conform to the shape shown in the standard.
3. The sides of the block shall conform to the shape shown on the standard. Forms must be used to insure that the block configuration is being adhered to and to insure the retention of the concrete during its consolidation. The concrete shall not hinder the removal of any flange bolts.
4. The back side of the block must be poured against undisturbed earth. If during the installation of the water main, additional earth has been excavated or disturbed, the concrete block shall be extended to an undisturbed area.
5. No backfilling may take place until the poured concrete has taken its initial set.
6. Reinforcement bars must be placed in proper position prior to pouring. Floating the bars into position will not be allowed.

**STANDARD SPECIFICATIONS FOR WATER
MAIN CONSTRUCTION**

TESTING

All tests shall be made in the presence of the City Engineer or his assigned representative.

The work of laying the pipes, fittings, hydrants, valves and other appurtenances shall be of such character as to leave all the pipes and connections water tight. To insure these conditions, the water main and all appurtenances shall be subjected to a test of water pressure of not less than one hundred ten (110) pounds per square inch.

The tests shall be made between valves as far as practicable, or as directed by the Engineer, within two (2) working days of the completion of each section of main. Where it is impracticable to test between valves or near connections to existing mains, temporary caps or plugs shall be placed on the mains to close off a section of the main so that it may be tested. The pressure shall be raised to a minimum of one hundred ten (110) pounds and so maintained for a period of not less than two (2) hours.

The amount of water forced into the main during this time shall be determined and this amount shall be taken as a basis to compute the leakage for twenty-four (24) hours. Pressure shall not vary more than two (2) pounds from the above during the test period. Results of tests shall be submitted to the City.

Allowable leakage shall be computed on the basis of fifteen (15) gallons per inch of pipe diameter, per mile of length, per twenty-four (24) hours. On this basis, the allowable leakage per one thousand (1,000) lineal feet of water main is as follows:

PIPE DIAMETER (INCHES)	TOTAL ALLOWABLE IN 2 HOURS (GALLONS)	LEAKAGE PER 1,000 FEET IN 24 HOURS (GALLONS)
2	0.5	5.7
4	0.9	11.4
6	1.4	17.0
8	1.9	22.7
10	2.4	28.4
12	2.8	34.1
14	3.3	39.8
16	3.8	45.4
18	4.3	51.1
20	4.7	56.8
24	5.7	68.2

If the leakage is at a greater rate than that specified, the trenches shall be re-excavated where necessary, the joints re-made and all defective work and materials replaced until the leakage is reduced to the allowable amount. This work is at the contractor's expense.

When the City can conveniently furnish water for testing pipe joints, jetting backfill or other purposes, there shall be no charge, except for the labor of turning the water off and on. However, the City shall not be obligated to furnish water, with or without charge, unless it can do so with reasonable convenience and entire safety to the public.

The necessary regulation or operation of valves to allow for the connections being made shall be performed only by the employees of the City's Water Services Division. Notice must be given forty-eight (48) hours in advance when a shut off is to be made to allow for a connection.

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

DISINFECTING WATER MAINS

Flushing and disinfecting new water mains shall be done per AWWA C651 (latest revisions).

Flushing shall be done through open ends. At the end of each straight run, flumes or suitable means shall be provided to carry the waste water up to and over the ground surface to an outlet. To keep the waste water to a minimum, a "pig" shall be inserted into the upstream end of the new pipe during construction. Flushing through fire hydrants will not be permitted.

Preliminary flushing shall be done per Section 5.2.2 of AWWA C651-86 standard.

All flushing of mains shall be done during periods of low water demand or at such times as may be directed by the Engineer and Water Services Supervisor.

To guard against a contaminated water supply and to provide safe, potable water for domestic use, all mains shall be thoroughly sterilized before being placed in service.

Water mains shall be sterilized as soon as pressure tests are completed per AWWA C651-86, Section 5.2.3, except paragraph 4 shall be deleted.

The form of chlorine to be used shall be granular calcium hypochlorite. Any deviation from this must have written approval from the Engineer.

The amount of sterilizing agent introduced shall be as per Table 4 of AWWA C651 under Column for 1-percent chlorine solution.

Final flushing, bacteriological tests and any re-disinfection shall be done per Sections 6, 7 and 8 of AWWA C651. In addition, bacteriological tests shall meet the requirements of Illinois Technical Policy Statement, Section 652.203.

Samples should be taken at approximately 500 foot intervals and at each branch line. Under special conditions on long construction runs, samples may be taken every 1,000 feet, but only with approval of the Engineer.

BACKFILLING

Backfilling of all water main shall be made in accordance with Method 1, Article 603.08 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, latest revision. Jetting will be permitted outside the limits of the pavement.

After the pipe is laid (and as soon as possible after testing,) the trench shall be filled with either selected earth, or select graded aggregate free from boulders or any foreign matter. Ashes, cinders, or other corrosive material shall not be allowed. Backfill around the pipes and to a depth of six (6) inches above the top of the pipes shall be thoroughly rammed and tamped. Place material in eight (8) inch lifts and compact using a mechanical tamper or roller. Care should be taken to prevent any lateral movement of the pipe from the tamping operation.

During the installation of all water mains, care must be exercised so that the trees in the boulevard and on private property behind the sidewalk will not be disturbed. All disturbed boulevard areas shall be graded and seeded.

When not otherwise ordered, the backfilling shall not be left unfinished more than three hundred (300) feet behind the completed pipe work.

DUST CONTROL

**STANDARD SPECIFICATIONS FOR WATER
MAIN CONSTRUCTION**

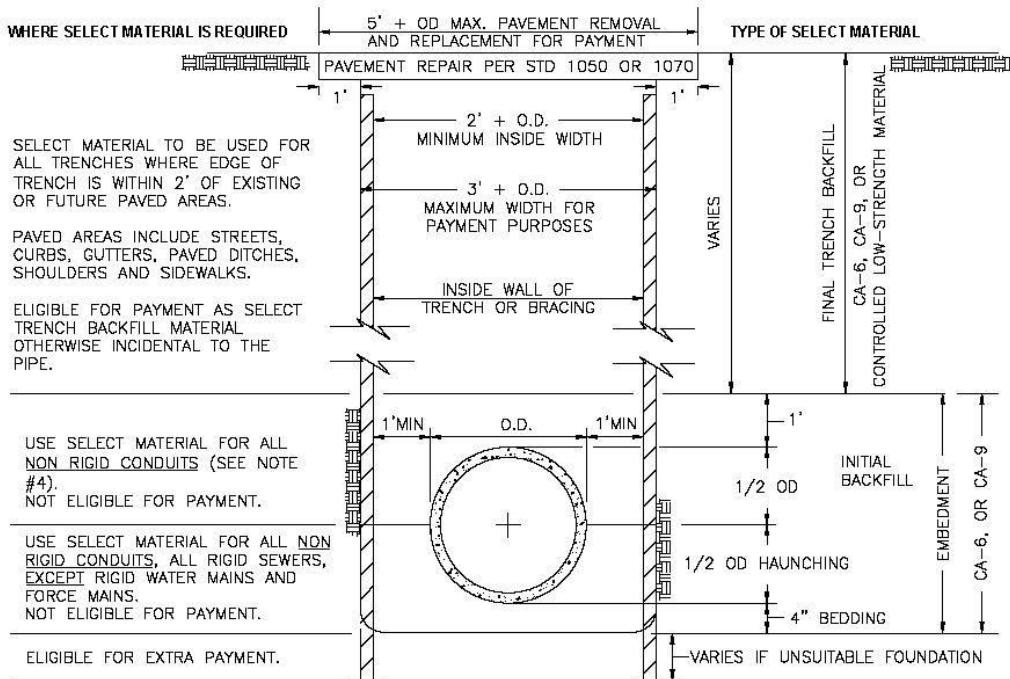
The contractor shall be responsible for control of dust within the construction area. Contractors are advised that street surfaces or portions of same undisturbed by trench excavation, haul routes and similar areas used by the contractor and subject to traffic, shall be maintained clear of dirt, sand or debris by sweeping, flushing or other appropriate measures. Such cleaning shall in no event lag more than one city block behind the trench excavation operation and shall be maintained as necessary for the duration of the construction work.

Where temporary surfacing over excavated areas must be maintained to allow trench consolidation and such surfacing becomes a source of dust, the engineer may authorize application of calcium chloride or approved chemical suppressant at such rate as will inhibit the dust problem.

**END
CITY OF DECATUR
STANDARD SPECIFICATIONS FOR
WATER MAIN CONSTRUCTION**

STANDARD DRAWINGS

STANDARD DESIGN TRENCH BACKFILL AND BEDDING



NOTES:

1. WHEN EDGE OF TRENCH IS WITHIN 2' OF ANY PAVED AREA, UNIFORM LAYERS OF SELECT MATERIAL NOT EXCEEDING 8" THICK SHALL BE PLACED AND COMPACTED BY RAMMING OR TAMPING WITH TOOLS APPROVED BY THE ENGINEER TO 95% OF STANDARD PROCTOR DENSITY.
2. WHEN EDGE OF TRENCH IS BEYOND 2' OF ANY PAVED AREA, UNIFORM LAYERS OF SUITABLE EXCAVATED MATERIAL NOT EXCEEDING 12" THICK SHALL BE PLACED AND COMPACTED BY RAMMING OR TAMPING TO THE SATISFACTION AND APPROVAL OF THE ENGINEER.
3. CA-7, CA-11, CA-13, OR CA-16 MAY BE USED FOR TRENCH BACKFILL WHEN AN APPROPRIATE GEOTECHNICAL FABRIC IS USED TO LINE THE TRENCH.
4. NON RIGID CONDUITS ARE DEFINED AS FLEXIBLE THERMOPLASTIC PIPE AND/OR CORRUGATED METAL PIPE.
5. BELLS HOLES WILL BE DUG. NO PIPE WILL BE ACCEPTED WHERE THE BELLS OF THE PIPE ARE SUPPORTING THE WEIGHT OF THE PIPE.

CITY OF DECATUR, ILLINOIS
DEPARTMENT OF ENGINEERING
& INFRASTRUCTURE

ADOPTED JANUARY 1, 2003

DIRECTOR OF ENGINEERING & INFRASTRUCTURE

ISSUED: 7-3-01

REVISIONS

BY DATE

K.G.D. 4/4/00

JMM 5/1/02

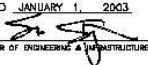
STANDARD# 2050
SHEET #1 OF 2

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**STANDARD DESIGN
TRENCH BACKFILL AND BEDDING
FOR
SANITARY SEWERS, STORM SEWERS
& WATERMANS
TABLE 1**

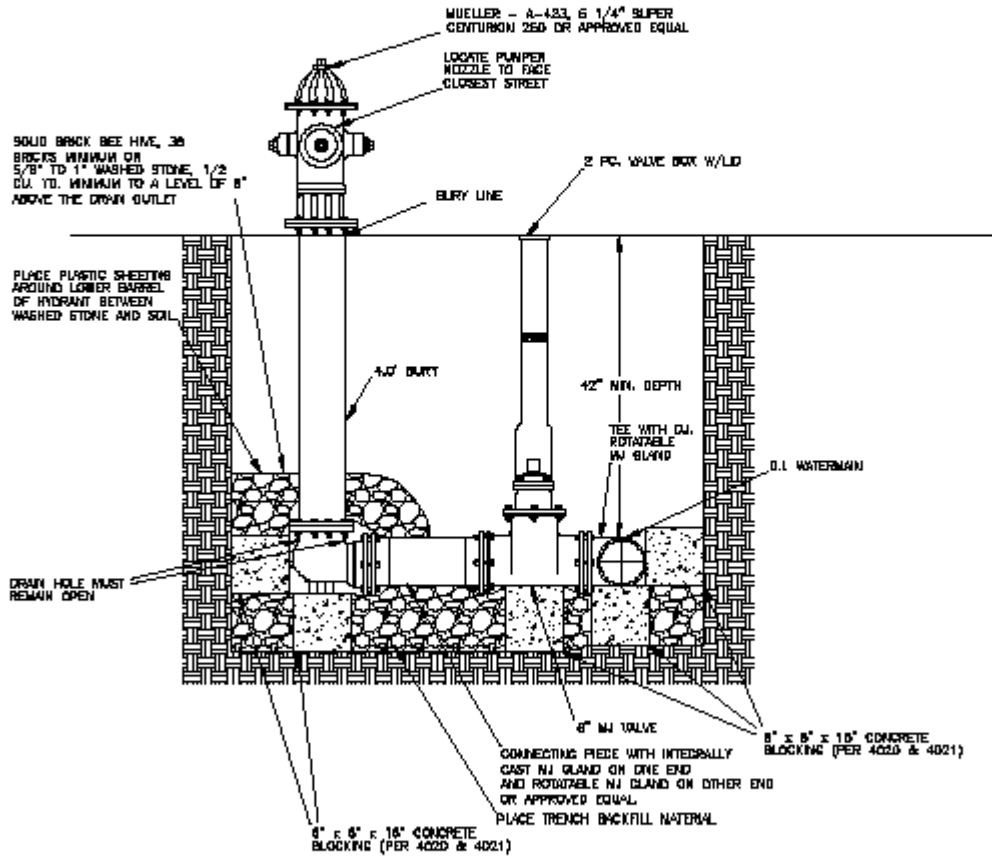
INSIDE DIAMETER OF CONDUIT IN INCHES "D"	MAXIMUM TRENCH WIDTH IN FEET FOR PAYMENT	FINAL BACKFILL CY \ FOOT PER FOOT OF DEPTH WHERE ELIGIBLE FOR PAYMENT	PERMANENT PAVEMENT REMOVAL AND REPLACEMENT SY \ FOOT
6	3.58	0.13	0.62
8	3.78	0.14	0.64
10	3.97	0.15	0.66
12	4.17	0.15	0.69
14	4.36	0.16	0.71
15	4.46	0.17	0.72
16	4.56	0.17	0.73
18	4.75	0.18	0.75
20	4.94	0.18	0.77
21	5.04	0.19	0.78
24	5.33	0.20	0.81
27	5.63	0.21	0.85
28	5.72	0.21	0.86
30	5.92	0.22	0.88
33	6.21	0.23	0.91
36	6.50	0.24	0.94
42	7.08	0.26	1.01
48	7.67	0.28	1.07
54	8.25	0.31	1.14
60	8.83	0.33	1.20
66	9.42	0.35	1.27
72	10.00	0.37	1.33
78	10.58	0.39	1.40
84	11.17	0.41	1.46
90	11.75	0.44	1.53
96	12.33	0.46	1.59
102	12.92	0.48	1.66
108	13.50	0.50	1.72
120	14.67	0.54	1.85

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CITY OF DECATUR, ILLINOIS DEPARTMENT OF ENGINEERING INFRASTRUCTURE ADOPTED JANUARY 1, 2003  DIRECTOR OF ENGINEERING & INFRASTRUCTURE	ISSUED:
	REVISIONS BY DATE K.G.D. 4/4/00 J.M. 5/7/02 K.S. 10/2002

STANDARD # 2050
SHEET #2 OF 2

STANDARD DESIGN TYPICAL FIRE HYDRANT SETTING

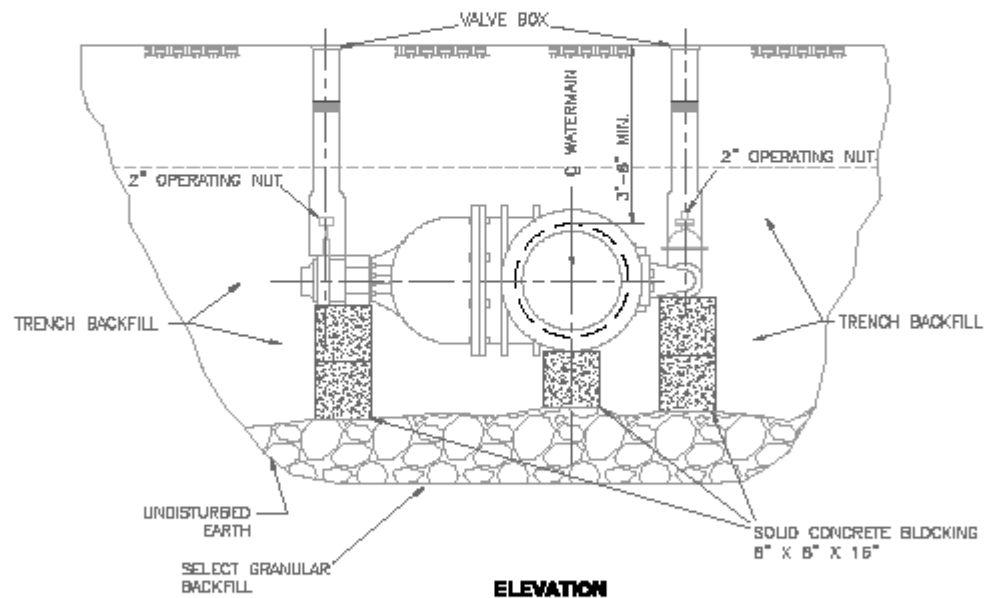
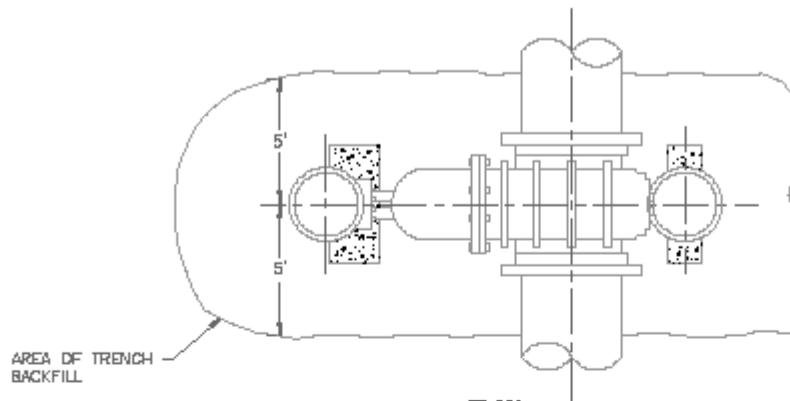


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CITY OF DECATUR, ILLINOIS WATER MANAGEMENT DEPARTMENT	DESIGNED: 1/21/03
	BY: DATE
ADOPTED: JANUARY 1, 2003	ENLT: 05/16/85
	PLCE: 02/15/04
	RELD: 03/07/07
	RESE: 07/02/08
	REV: 1/15/11
DESIGNED BY: PLEASER, RICHIE	

STANDARD #4000

STANDARD DESIGN WATERMAIN VALVES 16" & LARGER



NOTES:

1. FOR SIZES 16" TO 24" GATE VALVE SHALL BE MUELLER A-2361 DUCTILE IRON RESILIENT WEDGE OPEN RIGHT.
2. VALVES SHALL BE COMPLETE WITH MUELLER BEVEL GEARING VALVE OPERATOR.
3. BY-PASS VALVE REQUIRED FOR VALVES 18" AND LARGER.

STANDARD# 4010

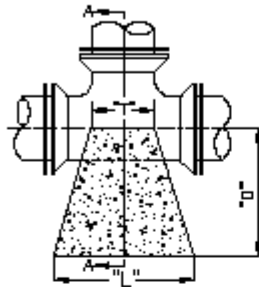
CITY OF DECATUR, ILLINOIS
WATER MANAGEMENT
DEPARTMENT

ADOPTED JANUARY 1, 2003

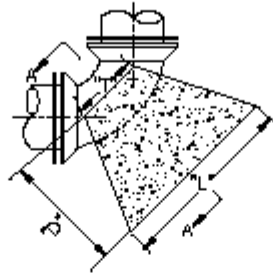
DIRECTOR OF PUBLIC WORKS

BY	DATE
EDM	12/18/02
REVISED	
BY	DATE
EDM	12/18/02
REVISED	
BY	DATE
EDM	12/18/02

STANDARD DESIGN POURED CONCRETE BLOCKING WATERMAIN - 12" TO 42"



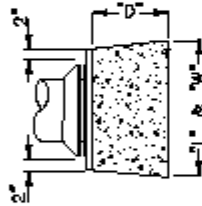
TEE



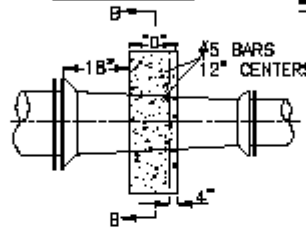
90° BENDS



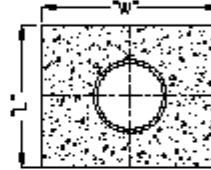
45° & 22 1/2° BENDS



PLUG



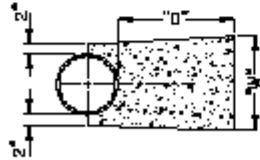
REDUCER



SECTION B-B

NOTES:

1. DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE. BLOCK MUST BE POURED AGAINST UNDISTURBED EARTH.
2. POURED BLOCKING NOT TO HINDER REMOVAL OR INSTALLATION OF BOLTS ON MJ FITTINGS.



SECTION A-A

BLOCKING DIMENSION

SIZE	12"	16"	20"	24"	30"	36"	42"
TEE							
D	6"	8"	12"	20"	30"	36"	44"
L	24"	32"	50"	62"	84"	96"	144"
W	24"	32"	40"	48"	80"	80"	120"
T	18"	22"	27"	32"	34"	36"	36"
90° BENDS							
D	10"	15"	---	---	---	---	---
L	34"	54"	---	---	---	---	---
W	38"	54"	---	---	---	---	---
T	14"	18"	---	---	---	---	---
45° BENDS							
D	8"	8"	12"	18"	20"	24"	28"
L	26"	38"	48"	60"	63"	66"	72"
W	20"	38"	38"	42"	48"	80"	66"
T	8"	22"	24"	32"	32"	33"	36"
22 1/2° BENDS							
D	8"	8"	10"	10"	16"	24"	30"
L	20"	36"	42"	42"	42"	42"	42"
W	20"	38"	38"	42"	42"	48"	48"
T	8"	20"	24"	24"	26"	30"	36"
PLUG							
D	6"	10"	16"	16"	27"	30"	36"
L	30"	36"	42"	52"	60"	96"	108"
W	30"	36"	42"	52"	60"	96"	108"
REDUCER							
SIZE	42" x 38"	36" x 30"	36" x 24"	30" x 24"	30" x 16"	24" x 16"	24" x 12"
D	12"	12"	12"	12"	12"	12"	12"
L	72"	48"	60"	42"	48"	38"	38"
W	72"	48"	60"	42"	48"	38"	36"

CITY OF DECATUR, ILLINOIS
DEPARTMENT OF ENGINEERING
& INFRASTRUCTURE

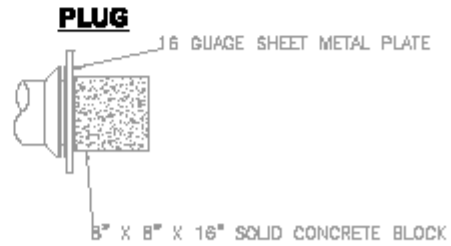
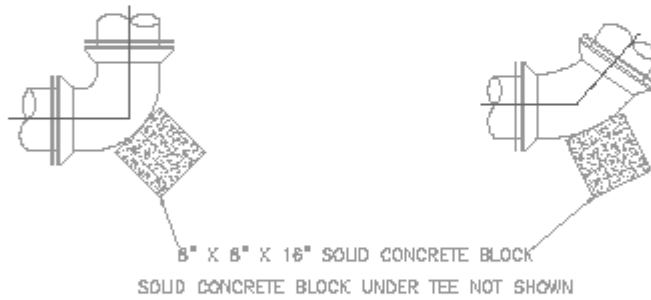
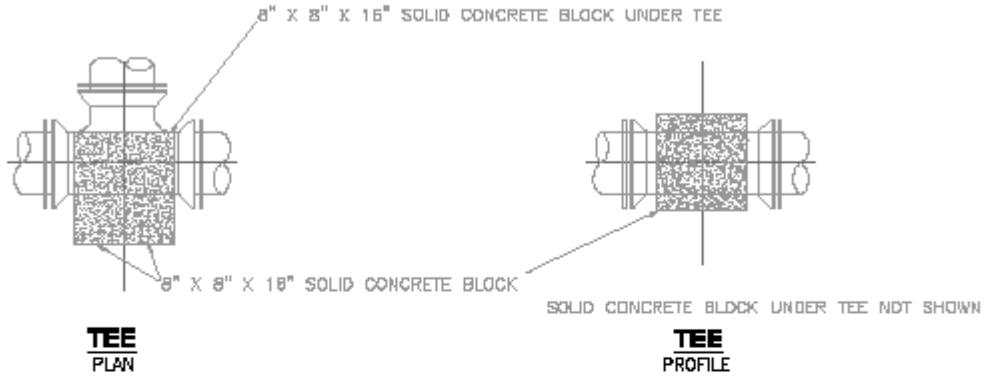
ADOPTED JANUARY 1, 2003

DEPUTY DIRECTOR OF PUBLIC WORKS

ISSUED BY	DATE
REVISION	DATE

STANDARD #4021

**STANDARD DESIGN
SOLID CONCRETE BLOCKING
WATERMAIN - 4" TO 12"**

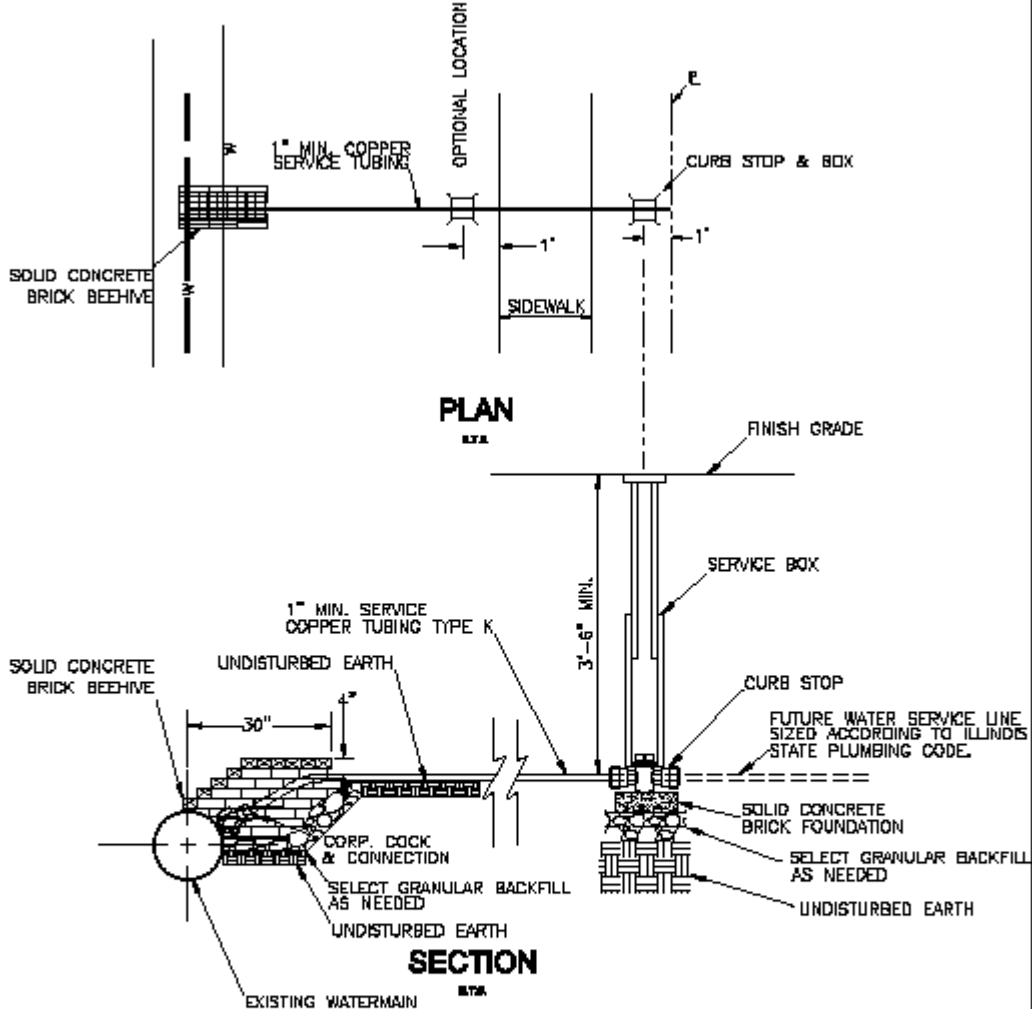


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CITY OF DECATUR, ILLINOIS WATER MANAGEMENT DEPARTMENT	REVISED 7-3-20	
	BY	DATE
ACCEPTED JANUARY 1, 2003	REVISED	4/9/07
	BY	12/1/07
	DATE	1/2/08
DIRECTOR OF PUBLIC WORKS		

STANDARD #4021A

**STANDARD DESIGN
WATER SERVICE INSTALLATION
TYPICAL DOMESTIC WATER SERVICE**



NOTES

1. CORPORATION COCK SHALL BE MUELLER #H-1500BN OR APPROVED EQUAL.
2. CURB STOP SHALL BE MUELLER #H-15155N OR APPROVED EQUAL.
3. SERVICE BOX SHALL BE #H-10300 OR APPROVED EQUAL.
4. WATER SERVICE SHALL CONFORM TO CITY CODE CHAPTERS 64 & 75.
5. TAP WATER MAIN AT 45° TO 90°.

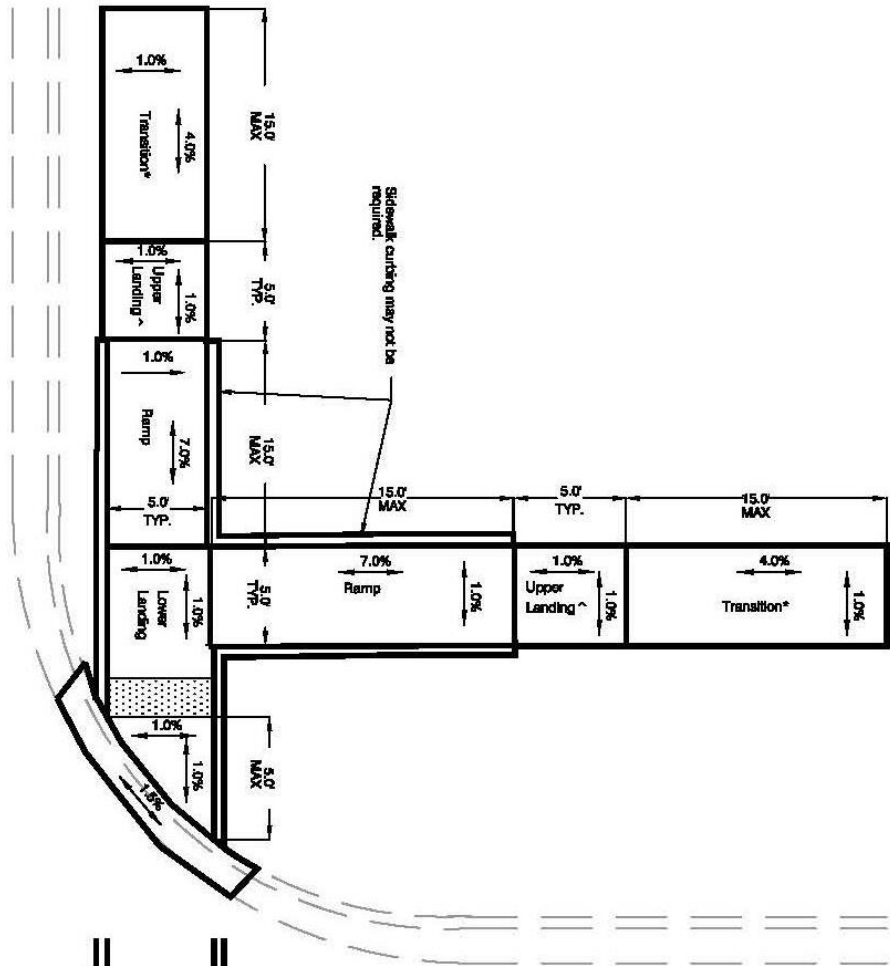
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CITY OF DECATUR, ILLINOIS WATER MANAGEMENT DEPARTMENT	REVISED 2-2-08
	BY DATE
ADOPTED APRIL 1, 2008	BY DATE
	BY DATE
	BY DATE
	BY DATE
MANAGER OF PUBLIC WORKS	

STANDARD #4040

TYPICAL D: ONE-DIRECTIONAL TWO SIDEWALK RAMPS

Note: Grades shown are maximum recommended slopes. See IDOT standards for curb ramps for schedule maximum slopes.



^ Upper landing needed adjacent to back end of 2% cross slope and 2% transition area needed adjacent to upper landing 2% cross slope.

100

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 & Streets

SPECIAL PROVISION
FOR
FILLING HMA CORE HOLES WITH NON-SHRINK GROUT

Effective: January 1, 2008

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.

Add the following after the first paragraph of Article 406.07(c) of the Standard Specifications:

“Upon completion of coring for density testing, all free water shall be removed from the core holes prior to filling. All core holes shall be filled with a non-shrink grout from the Department’s approved list, which shall be mixed in a separate container prior to placement in the hole. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent pavement.”

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.

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 (BDE)

Effective: September 1, 2000

Revised: March 2, 2019

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

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

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

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

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a

good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform 7.00 % 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 is receives as a result of the lease arrangement.

- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

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

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

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

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

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

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

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

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

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

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

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

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

EQUIPMENT PARKING AND STORAGE (BDE)

Effective: November 1, 2017

Replace the first paragraph of Article 701.11 of the Standard Specifications with the following.

“701.11 Equipment Parking and Storage. During working hours, all vehicles and/or nonoperating equipment which are parked, two hours or less, shall be parked at least 8 ft (2.5 m) from the open traffic lane. For other periods of time during working and for all nonworking hours, all vehicles, materials, and equipment shall be parked or stored as follows.

- (a) When the project has adequate right-of-way, vehicles, materials, and equipment shall be located a minimum of 30 ft (9 m) from the pavement.
- (b) When adequate right-of-way does not exist, vehicles, materials, and equipment shall be located a minimum of 15 ft (4.5 m) from the edge of any pavement open to traffic.
- (c) Behind temporary concrete barrier, vehicles, materials, and equipment shall be located a minimum of 24 in. (600 mm) behind free standing barrier or a minimum of 6 in. (150 mm) behind barrier that is either pinned or restrained according to Article 704.04. The 24 in. or 6 in. measurement shall be from the base of the non-traffic side of the barrier.
- (d) Behind other man-made or natural barriers meeting the approval of the Engineer.”

80388

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
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	Surface Courses	IL-9.5, IL-9.5FG, SMA 12.5, SMA 9.5”
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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 N_{design} = 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 (BDE)

Effective: November 1, 2017

Revise the Air Content % of Class PP Concrete in Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

"TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA		
Class of Conc.	Use	Air Content %
PP	Pavement Patching Bridge Deck Patching (10)	
	PP-1	4.0 - 8.0"
	PP-2	
	PP-3	
	PP-4	
	PP-5	

Revise Note (4) at the end of Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

“(4) For all classes of concrete, the maximum slump may be increased to 7 in (175 mm) when a high range water-reducing admixture is used. For Class SC, the maximum slump may be increased to 8 in. (200 mm). For Class PS, the maximum slump may be increased to 8 1/2 in. (215 mm) if the high range water-reducing admixture is the polycarboxylate type.”

80389

PORTLAND CEMENT CONCRETE BRIDGE DECK CURING (BDE)

Effective: April 1, 2015

Revised: November 1, 2019

Revise the following three entries and add the following footnote to the Index Table of Curing and Protection of Concrete Construction in Article 1020.13 of the Standard Specifications:

"INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION"			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5)(6) ^{8/ 19/}	7	1020.13(d)(1)(2)
Superstructure (Approach Slab)	1020.13(a)(5)(6) ^{19/}	3	1020.13(d)(1)(2) ^{17/}
Deck	1020.13(a)(5)(6) ^{19/}	7	1020.13(d)(1)(2) ^{17/}

19/ The cellulose polyethylene or synthetic fiber with polymer polyethylene blanket method shall not be used on latex modified concrete, or vertical concrete surfaces greater than 1 ft (300 mm), e.g. parapets."

Add the following to Article 1020.13(a) of the Standard Specifications.

"(6)Cellulose Polyethylene Blanket Method and Synthetic Fiber with Polymer Polyethylene Blanket Method. After the surface of concrete has been textured or finished, it shall be covered immediately with a wetted cellulose polyethylene blanket or wetted synthetic fiber with polymer polyethylene blanket. The blankets shall be installed with the white perforated polyethylene side facing up. The blanket's fiber side shall be wetted immediately prior to placement or as the blanket is being placed, and the polyethylene side shall be thoroughly soaked with a gentle spray of water immediately after placement. For bridge decks, a foot bridge shall be used to place and wet the blankets.

Adjoining blankets shall overlap a minimum of 8 in. (200 mm). Bubbles and wrinkles shall be removed with a broom, squeegee, or as recommended by the manufacturer.

The blankets shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without indentations to the concrete surface. The soaker hoses shall be placed on top of the blankets at a maximum 4 ft (1.2 m) spacing. The blankets shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

For areas inaccessible to the blankets, curing shall be according to Article 1020.13(a)(3). "

Revise the first paragraph of Article 1022.03 of the Standard Specifications to read:

“1022.03 Waterproof Paper Blankets, White Polyethylene Sheeting, Burlap-Polyethylene Blankets, Cellulose Polyethylene Blankets, and Synthetic Fiber with Polymer Polyethylene Blankets. These materials shall be white and according to ASTM C 171.

The cellulose polyethylene blanket shall consist of a perforated white polyethylene sheeting with cellulose fiber backing and shall be limited to single use only. The cellulose polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled on the product with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.

The synthetic fiber with polymer polyethylene blanket shall consist of a perforated white polyethylene sheeting with absorbent synthetic fibers and super absorbent polymer backing, and shall be limited to single use only. The synthetic fiber with polymer polyethylene blankets shall be delivered to the jobsite unused and in the manufacturer's unopened packaging until ready for installation. Each roll shall be clearly labeled on the product with product name, manufacturer, and manufacturer's certification of compliance with ASTM C 171.”

80359

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revised: January 2, 2020

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). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”, by weight of RAS. All RAS used shall come from a Central Bureau of Materials approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 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, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. 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 District 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. All FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP shall pass the sieve size specified below for the mix into which the FRAP will be incorporated.

Mixture FRAP will be used in:	Sieve Size that 100 % of FRAP Shall Pass
IL-19.0	1 1/2 in. (37.5 mm)
SMA 12.5	1 in. (25.0 mm)
IL-9.5, IL-9.5FG, SMA 9.5	3/4 in. (19.0 mm)
IL-4.75	1/2 in. (12.5 mm)

- (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. All 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) 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, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, 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) 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.

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 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restocking. 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 extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

(b) RAS Testing. RAS or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to Central 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 1000 tons (900 metric tons) and one sample per 250 tons (225 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS or RAS blended with manufactured sand shall be stockpiled in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

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 Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

If the sampling and testing was performed at the shingle processing facility in accordance with the QC Plan, the Contractor shall obtain and make available all of the test results from start of the initial stockpile.

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

- (a) 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 %
No. 4 (4.75 mm)	± 6 %
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	
No. 30 (600 μm)	± 5 %
No. 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.4 % ^{1/}
G_{mm}	± 0.03

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

If more than 20 percent of the individual sieves and/or asphalt binder content tests 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 District for evaluation.

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

- (b) Evaluation of RAS and RAS Blended with Manufactured Sand 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
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.0 %
Asphalt Binder Content	± 1.5 %

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, or if the percent unacceptable material exceeds 0.5 percent by weight of material retained on the # 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 District for evaluation.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

(a) RAP. The aggregate quality of the RAP for homogeneous and conglomerate 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, Superpave/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, Superpave/HMA (High ESAL) binder, or (Low ESAL) IL-19.0L binder mixtures are designated as containing Class C 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 #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications.

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 #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 shall not exceed the amounts listed in the following table.

RAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures ^{1/2/}	RAP/RAS Maximum ABR %		
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). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when RAP/RAS ABR exceeds 25 percent (i.e. 26 percent RAP/RAS 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.

FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures ^{1/2/}	FRAP/RAS Maximum ABR %		
	Binder	Surface	Polymer Modified Binder or Surface
Ndesign			
30	50	40	10
50	40	35	10
70	40	30	10
90	40	30	10
SMA	--	--	20
IL-4.75	--	--	30

- 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). If warm mix asphalt (WMA) technology is utilized and production temperatures do not exceed 275 °F (135 °C), the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP/RAS ABR exceeds 25 percent (i.e. 26 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 results, as defined under "Testing" herein, 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.

- (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.

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 feed system to remove or reduce oversized material.

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

- (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 material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(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 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.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except “Non-Quality” and “FRAP”. The testing requirements of Article 1031.03 shall not apply. RAP used shall be according to the current Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.
- (b) Gradation. 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.”

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 µm), %	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

STEEL PLATE BEAM GUARDRAIL MANUFACTURING (BDE)

Effective: January 1, 2019

Revise the first three paragraphs of Article 1006.25 of the Standard Specifications to read:

“1006.25 Steel Plate Beam Guardrail. Steel plate beam guardrail, including bolts, nuts, and washers, shall be according to AASHTO M 180. The guardrail shall be Class A, with a Type II galvanized coating.

Steel plates for mounting guardrail on existing culverts shall be according to AASHTO M 270 Grade 36 (M 270M Grade 250) and zinc coated according to AASHTO M 111.

The Department will accept guardrail based on the “Brand Registration and Guarantee” requirements of AASHTO M 180 and the manufacturer shall be listed as compliant through the NTPEP Program. The Department will maintain a qualified product list.”

80408

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 BARRIER TERMINAL, TYPE 1 SPECIAL (BDE)

Effective: November 1, 2018

Revise Article 631.04 of the Supplemental Specifications to read:

“631.04 Traffic Barrier Terminal, Type 1 Special (Tangent) and Traffic Barrier Terminal, Type 1 Special (Flared). These terminals shall be on the Department’s qualified product list.

The terminal shall be installed according to the manufacturer’s specifications. The beginning length of need point of the terminal shall be placed within 12 ft 6 in (3.8 m) of the length of need point shown on the plans.

The terminal shall be delineated with a terminal marker direct applied. No other guardrail delineation shall be attached to the terminal section.”

Revise the first paragraph of Article 631.12 of the Standard Specifications to read:

“631.12 Method of Measurement. The various types of traffic barrier terminals will be measured for payment, complete in place, in units of each. The pay limit between the traffic barrier terminal and the adjacent guardrail shall be as shown on the plans, except for the following:

- (a) Traffic Barrier Type 1, Special. The pay limit for a traffic barrier, Type 1 special shall be as shown on the manufacturer’s drawing(s).
- (b) Traffic Barrier Type 10. The pay limit for the traffic barrier terminal, Type 10 shall be at the centerline of the end shoe splice.”

80403

TRAFFIC CONTROL DEVICES - CONES (BDE)

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

80409

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

"(11) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.

- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

"(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C).
WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

| Revised: April 2, 2015

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

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

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

80302

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 125 working days.

80071

PIPE UNDERDRAINS FOR STRUCTURES

Effective: May 17, 2000

Revised: January 22, 2010

Description. This work shall consist of furnishing and installing a pipe underdrain system as shown on the plans, as specified herein, and as directed by the Engineer.

Materials. Materials shall meet the requirements as set forth below:

The perforated pipe underdrain shall be according to Article 601.02 of the Standard Specifications. Outlet pipes or pipes connecting to a separate storm sewer system shall not be perforated.

The drainage aggregate shall be a combination of one or more of the following gradations, FA1, FA2, CA5, CA7, CA8, CA11, or CA13 thru 16, according to Sections 1003 and 1004 of the Standard Specifications.

The fabric surrounding the drainage aggregate shall be Geotechnical Fabric for French Drains according to Article 1080.05 of the Standard Specifications.

Construction Requirements. All work shall be according to the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The pipe underdrains shall consist of a perforated pipe drain situated at the bottom of an area of drainage aggregate wrapped completely in geotechnical fabric and shall be installed to the lines and gradients as shown on the plans.

Method of Measurement. Pipe Underdrains for Structures shall be measured for payment in feet (meters), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement. Concrete headwalls shall be included in the cost of Pipe Underdrains for Structures, but shall not be included in the measurement for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for PIPE UNDERDRAINS FOR STRUCTURES of the diameter specified. Furnishing and installation of the drainage aggregate, geotechnical fabric, forming holes in structural elements and any excavation required, will not be paid for separately, but shall be included in the cost of the pipe underdrains for structures.

SLIPFORM PARAPET

Effective: June 1, 2007

Revised: March 1, 2019

The following shall be added to the end of Article 503.16(b) of the Standard Specifications.

- (3) Slipforming parapets. Unless otherwise prohibited herein or on the plans, at the option of the Contractor, concrete parapets on bridge decks may be constructed by slipforming in lieu of the conventional forming methods. Slipforming will not be permitted for curved parapets on a radius of 1500ft (457 m) or less.

The slipform machine shall be self-propelled and have automatic horizontal and vertical grade control. For 34 inch (864 mm) and 39 inch (991 mm) tall parapets the machine shall be equipped with a minimum of four (4) vibrators. For 42 inch (1.067 m) and 44 inch (1.118 m) tall parapets the machine shall be equipped with a minimum of five (5) vibrators. The equipment shall be approved by the Engineer before use.

If the Contractor wishes to use the slipform parapet option for 44 inch (1.067 m) tall parapets he/she shall construct a test section in a temporary location to demonstrate his/her ability to construct the parapets without defect. The test section shall be constructed under similar anticipated weather conditions, using the same means and methods, equipment, operator, concrete plant, concrete mix design, and slump as proposed for the permanent slipform parapets.

The test section shall be at least 50 feet (15 meters) in length and shall be of the same cross section shown on the plans. The contractor shall place all of the reinforcement embedded in the parapet shown on the plans. Upon completion of the test section, the Contractor shall saw cut the test section into 2 foot (600 mm) segments and separate the segments for inspection by the Engineer.

The test section shall demonstrate to the satisfaction of the Engineer that the Contractor can slipform the parapets on this project without defects. The acceptance of the test section does not constitute acceptance of the slipform parapets in place.

The concrete mix design may combine two or more coarse aggregate sizes, consisting of CA-7, CA-11, CA-13, CA-14, and CA-16, provided a CA-7 or CA-11 is included in the blend in a proportion approved by the Engineer.

The slipform machine speed shall not exceed 3 ft (0.9 m) per minute. Any section of parapet placed with the slipform machine moving in excess of the maximum allowed speed will be rejected. Any time the speed of the machine drops below 0.5 ft (150 mm) per minute will be considered a stoppage of the slipforming operation, portions of parapet placed with three or more intermittent stoppages within any 15 ft (4.6 m) length will be rejected. The contractor shall schedule concrete delivery to maintain a uniform delivery rate of concrete into the slipform machine. If delivery of concrete from the truck into the slipforming machine

is interrupted by more than 15 minutes, the portion of the wall within the limits of the slipform machine will be rejected. Any portion of the parapet where the slipforming operation is interrupted or stopped within the 15 minute window may be subject to coring to verify acceptance.

If the Contractor elects to slipform, the parapet cross-sectional area and reinforcement bar clearances shall be revised according to the details for the Concrete Parapet Slipforming Option. In addition, if embedded conduit(s) are detailed, then the contractor shall utilize the alternate reinforcement as detailed.

The use of cast-in-place anchorage devices for attaching appurtenances and/or railings to the parapets will not be allowed in conjunction with slipforming of parapets. Alternate means for making these attachments shall be as detailed on the plans or as approved by the Engineer.

All reinforcement bar intersections within the parapet cross section shall be 100 percent tied utilizing saddle ties, wrap and saddle ties or figure eight ties to maintain rigidity during concrete placement. At pre-planned sawcut joints in the parapet, Glass Fiber Reinforced Polymer (GFRP) reinforcement shall be used to maintain the rigidity of the reinforcement cage across the proposed joints as detailed for the Concrete Parapet Slipforming Option.

Glass Fiber Reinforced Polymer (GFRP) reinforcement shall be subject to approval by the Engineer. Other non-ferrous reinforcement may be proposed for use but shall be subject to approval by the Engineer. GFRP reinforcement shall be tied the same as stated in the previous paragraph.

The Contractor may propose supplemental reinforcement for stiffening to prevent movement of the reinforcement cage and/or for conduit support subject to approval by the Engineer.

Clearances for these bars shall be the same as shown for the required bars and these bars shall be epoxy coated. If the additional reinforcement is used, it shall be at no additional cost to the Department.

For projects with plan details specifying parapet joints spaced greater than 20 ft (6 m) apart, additional sawcut joints, spaced between 10 ft (3 m) and 20 ft (6 m), shall be placed as directed by the Engineer. The horizontal reinforcement extending through the proposed joints shall be precut to provide a minimum of 4 in. (100 mm) gap, centered over the joint, between rebar ends. The ends of the reinforcement shall be repaired according to Article 508.04.

After the slipform machine has been set to proper grade and prior to concrete placement, the clearance between the slipform machine inside faces and reinforcement bars shall be checked during a dry run by the Contractor in the presence of the Engineer. The dry run shall not begin until the entire reinforcing cage has been tied and the Engineer has verified and approved the placement and tying of the reinforcing bars. Any reinforcement bars

found to be out of place by more than ½ in. (13 mm), or any dimensions between bars differing from the plans by more than ½ in. (13 mm) shall be re-tied to the plan dimensions.

During the dry run and in the presence of the Engineer, the Contractor shall check the clearance of the reinforcement bars from the inside faces of the slipform mold. In all locations, the Contractor shall ensure the reinforcement bars have the minimum cover distance shown on the plans. This dry run check shall be made for the full distance that is anticipated to be placed in the subsequent pour. Reinforcement bars found to have less than the minimum clearance shall be adjusted and the dry run will be performed again, at least in any locations that have been readjusted.

For parapets adjacent to the watertable, the contractor shall, for the duration of the construction and curing of the parapet, provide and maintain an inspection platform along the back face of the parapet. The inspection platform shall be rigidly attached to the bridge superstructure and be of such design to allow ready movement of inspection personnel along the entire length of the bridge.

The aluminum cracker plates as detailed in the plans shall be securely tied in place and shall be coated or otherwise treated to minimize their potential reaction with wet concrete. In lieu of chamfer strips at horizontal and vertical edges, radii may be used. Prior to slipforming, the Contractor shall verify proper operation of the vibrators using a mechanical measuring device subject to approval by the Engineer.

The top portion of the joint shall be sawcut as shown in the details for the Concrete Parapet Slipforming Option. Sawing of the joints shall commence as soon as the concrete has hardened sufficiently to permit sawing without excessive raveling. All joints shall be sawed to the full thickness before uncontrolled shrinkage cracking takes place but no later than 8 hours after concrete placement. The sawcut shall be approximately 3/8 in. (10 mm) wide and shall be performed with a power circular concrete saw. The joints shall be sealed with an approved polyurethane sealant, conforming to ASTM C 920, Type S, Grade NS, Class 25, Use T, to a minimum depth of 1/2 in. (12 mm), with surface preparation and installation according to the manufacturer's written instructions. Cork, hemp or other compressible material may be used as a backer. The sawcut will not require chamfered edges.

Ends of the parapet shall be formed and the forms securely braced. When slipforming of parapets with cross sectional discontinuities such as light standards, junction boxes or other embedded appurtenances except for name plates, is allowed, the parapet shall be formed for a minimum distance of 4 ft (1.2 m) on each side of the discontinuity.

For acceptance and rejection purposes a parapet section shall be defined as the length of parapet between adjacent vertical parapet joints.

The maximum variance of actual to proposed longitudinal alignment shall not exceed ±3/4 in. (20 mm) with no more than 1/4 inch in 10 ft (6 mm in 3 m). Notwithstanding this tolerance, abrupt variance in actual alignment of 1/2 inch in 10 ft (13 mm in 3 m) will be cause for rejection of the parapet section.

In addition, all surfaces shall be checked with a 10 ft (3 m) straight edge furnished and used by the Contractor as the concrete is extruded from the slipform mold. Continued variations in the barrier surface exceeding 1/4 inch in 10 ft (6 mm in 3 m) will not be permitted and remedial action shall immediately be taken to correct the problem.

The use of equipment or methods which result in dimensions outside the tolerance limits shall be discontinued. Parapet sections having dimensions outside the tolerance limits will be rejected.

Any visible indication that less than specified cover of concrete over the reinforcing bars has been obtained, or of any cracking, tearing or honeycombing of the plastic concrete, or any location showing diagonal or horizontal cracking will be cause for rejection of the parapet section in which they are found.

The vertical surfaces at the base of the barrier within 3 in. (75 mm) of the deck surface shall be trowelled true after passage of the slipform machine. Hand finishing of minor sporadic surface defects may be allowed at the discretion of the Engineer. All surfaces of the parapet except the top shall receive a final vertical broom finish. Any deformations or bulges remaining after the initial set shall be removed by grinding after the concrete has hardened.

Slipformed parapets shall be wet cured according to either Article 1020.13(a)(3) or Article 1020.13(a)(5). For either method, the concrete surface shall be covered within 30 minutes after it has been finished. The cotton mat or burlap covering shall be held in place with brackets or another method approved by the Engineer. The Contractor shall have the option, during the period from April 16 through October 31, to delay the start of wet curing by applying a linseed oil emulsion curing compound. Exercising this option waives the requirement for protective coat according to Article 503.19. The linseed oil emulsion shall be according to Article 1022.01 and shall be applied according to Articles 1020.13 Notes-General 8/ and 1020.13(a)(4). The delay for wet curing shall not exceed 3 hours after application of the linseed oil emulsion.

A maximum of three random 4 in. (100 mm) diameter cores per 100 ft (30 m) of parapet shall be taken as directed by the Engineer, but no less than three random cores shall be taken for each parapet pour. At least 2 cores shall be located to intercept the top horizontal bar. Unless otherwise directed by the Engineer, coring shall be accomplished within 48 hours following each parapet pour. Separate parapets poured on the same date shall be considered separate pours. Random cores will not be measured for payment.

The Engineer will mark additional locations for cores where, in the sole opinion of the Engineer, the quality of the slipformed parapet is suspect.

The Engineer or his representative will be responsible for evaluation the cores. Any cores showing voids of any size adjacent to the reinforcement bars, or showing voids not adjacent to reinforcement bars of 1/4 square inch (160 square millimeters) in area or more, or

showing signs of segregation, or showing signs of cracking shall be considered failures and the parapet section from which it was taken will be rejected. Parapets with less than 1 1/2 inches of concrete cover over the reinforcement shall be rejected.

Rejected parapet sections shall be removed and replaced for the full depth cross-section of the parapet except that concrete covers between 1 inch and 1½ inches may be open to remedial action subject to the approval of the Engineer. Such action could entail up to and including removal and replacement.

The minimum length of parapet removed and replaced shall be 3 ft (1 m). Additional cores may be required to determine the longitudinal extent of removal and replacement if it can not be determined and agreed upon by other means (i.e. visual, sounding, non-destructive testing, etc.).

Any parapet section with more than one half of its length rejected or with remaining segments less than 10 ft (3 m) in length shall be removed and replaced in its entirety.

If reinforcement bars are damaged during the removal and replacement, additional removal and replacement shall be done, as necessary, to ensure minimum splice length of replacement bars. Any damage to epoxy coating of bars shall be repaired according to Article 508.04.

All core holes will be filled with a non-shrink grout meeting the requirements of Section 1024.

Basis of Payment. When the contractor, at his/her option, constructs the parapet using slipforming methods, no adjustment in the quantities for Concrete Superstructures and Reinforcement Bars, Epoxy Coated to accommodate this option will be allowed. Compensation under the contract bid items for Concrete Superstructures and Reinforcement Bars, Epoxy Coated shall cover the cost of all work required for the construction of the parapet and any test section(s) required, and for any additional costs of work or materials associated with slipforming methods.

BRIDGE DECK CONSTRUCTION

Effective: October 22, 2013

Revised: December 21, 2016

When Diamond Grinding of Bridge Sections is specified, hand finishing of the deck surface shall be limited to areas not finished by the finishing machine and to address surface corrections according to Article 503.16(a)(2). Hand finishing shall be limited as previously stated solely for the purpose of facilitating a more timely application of the curing protection. In addition the requirements of 503.16(a)(3)a. and 503.16(a)(4) will be waived.

Revise the Second Paragraph of Article 503.06(b) to read as follows.

“When the Contractor uses cantilever forming brackets on exterior beams or girders, additional requirements shall be as follows.”

Revise Article 503.06(b)(1) to read as follows.

- “(1) Bracket Placement. The spacing of brackets shall be per the manufacturer’s published design specifications for the size of the overhang and the construction loads anticipated. The resulting force of the leg brace of the cantilever bracket shall bear on the web within 6 inches (150 mm) of the bottom flange of the beam or girder.”

Revise Article 503.06(b)(2) to read as follows.

- “(2) Beam Ties. The top flange of exterior steel beams or girders supporting the cantilever forming brackets shall be tied to the bottom flange of the next interior beam. The top flange of exterior concrete beams supporting the cantilever forming brackets shall be tied to the top flange of the next interior beam. The ties shall be spaced at 4 ft (1.2 m) centers. Permanent cross frames on steel girders may be considered a tie. Ties shall be a minimum of 1/2 inch (13 mm) diameter threaded rod with an adjusting mechanism for drawing the tie taut. The ties shall utilize hanger brackets or clips which hook onto the flange of steel beams. No welding will be permitted to the structural steel or stud shear connectors, or to reinforcement bars of concrete beams, for the installation of the tie bar system. After installation of the ties and blocking, the tie shall be drawn taut until the tie does not vary from a straight line from beam to beam. The tie system shall be approved by the Engineer.”

Revise Article 503.06(b)(3) to read as follows.

- “(3) Beam Blocks. Suitable beam blocks of 4 in x 4 in (100 x 100 mm) timbers or metal structural shapes of equivalent strength or better, acceptable to the Engineer, shall be wedged between the webs of the two beams tied together, within 6 inches (150 mm) of the bottom flange at each location where they are tied. When it is not feasible to have

the resulting force from the leg brace of the cantilever brackets transmitted to the web within 6 inches (150 mm) of the bottom flange, then additional blocking shall be placed at each bracket to transmit the resulting force to within 6 inches (150 mm) of the bottom flange of the next interior beam or girder.”

Delete the last paragraph of Article 503.06(b).

PERFORMED PAVEMENT JOINT SEAL

Effective: October 4, 2016

Revised: March 1, 2019

Description. This work shall consist of furnishing all labor, equipment and materials necessary to prepare the joint opening and install pavement joint seal(s) at the locations specified. Unless otherwise detailed on the plans, the joint shall be sized for a rated movement of 2 inches (50 mm).

Materials: Unless otherwise specified, one of the following prefabricated joint seals will be permitted.

- (a) Preformed Elastomeric Joint Seal. This material shall be according to Section 1053.01.
- (b) Preformed Pre-compressed, Silicone Coated, Self-Expanding Sealant System. This Sealant system shall be comprised of three components: 1) cellular polyurethane foam impregnated with hydrophobic 100% acrylic, water-based emulsion, factory coated with highway-grade, fuel resistant silicone; 2) field-applied epoxy adhesive primer, 3) field-injected silicone sealant bands.

The preformed, pre-compressed silicone joint seal shall, as a minimum, be according to the following:

- The joint seal shall be held in place by a non-sag, high modulus silicone adhesive.
- The joint seal shall be compatible with the epoxy and header material.
- The joint seal shall withstand the effects of vertical and lateral movements, skew movements and rotational movement without adhesive or cohesive failure.
- The joint seal shall be designed so that, the material is capable of movement of +50%, -50% (100% total) of nominal material size.
- Changes in plane and direction shall be executed using factory fabricated 90 degree transition assemblies. The transitions shall be watertight at the inside and outside corners through the full movement of the product.
- The depth of the joint shall be recessed 3/4 in. (19 mm) below the riding surface throughout the normal limits of joint movement.
- The joint seal shall be resistant to ultraviolet rays.
- The joint seal shall be resistant to abrasion, oxidation, oils, gasoline, salt, and other materials that may be spilled on or applied to the surface.
- The manufacturer shall certify that the joint composition shall be free of any waxes or wax compounds; asphalts or asphalt compounds.

The joint material shall meet the following physical properties:

Property	Requirement	Test Method
Tensile Strength of Silicone Coating (min)	140 psi	ASTM D 412
UV Resistance of Joint System	No Changes--2000 Hours	ASTM C793
Density of Cellular Polyurethane Foam	4.0 lb/ cu ft (200kg/cu m)	ASTM D545
Heat Aging Effects (Silicone Coating)	No cracking, chalking	ASTM C 792
Joint System Operating temp range (min)	-40° F to 185° F	ASTM C 711

The adhesive shall be a two-component, 100% solid, modified epoxy meeting the requirements of ASTM C881, Type I, Grade 3, Class B & C. The adhesive shall also have the following properties:

Property	Requirement	Test method
Tensile Strength	2,500 psi (24 MPa) min.	ASTM D638
Compressive Strength	7000 psi (48 MPa) min.	ASTM D695
Bond Strength (Dry Cure)	2000 psi (28MPa) min	ASTM C882
Water Absorption	0.1% by weight	ASTM D570

The silicone band adhesive shall have the following properties:

Property	Requirement	Test Method
Movement Capability	+50/-50%	ASTM C 719
Elongation at Break	>600%	ASTM D 5893
Slump	≤=0.3"	ASTM D 2202
Hardness (Shore A) max.	20	ASTM C 661
Tack free time (max)	60 minutes	ASTM C 679
Heat Aging Effects	No cracking, chalking	ASTM C 792
Resilience	≥ 75%	ASTM D5329
Bond	0% Adhesive or Cohesive Failure after 5 cycles @100%extension	ASTM D 5329

(c) Performed Silicone Joint Seal. The preformed silicone joint seal used for this item shall conform to the following specifications:

**Table 1
Physical Properties of Preformed Silicone Gland**

Property	Requirement	Test Method
Rated Movement Capability	+2 ¼ inch total	N/A
Tensile Strength, psi.	1000 min	ASTM D 412
Elongation	400% min	ASTM D 412
Tear (die B)	100 ppi. min	ASTM D 624
Hardness Durometer (Shore A).	55 +/- 5 max	ASTM D 2240
Compression set at 212°F, 70 hrs	30% max	ASTM D 395
Heat Aged Properties	5pt max loss on Durometer	ASTM D 573
Tensile and Elongation % Loss	10 % max	

The color of the preformed silicone seal shall be black, made by the addition of Carbon Black fillers which increases UV resistance, tensile strength, and abrasion wear properties.

The locking adhesive shall be non-sag, high modulus silicone adhesive conforming to the following specifications:

Table 2
Physical Properties of the Silicone Locking Adhesive

Property	Requirement	Test Method
Tensile Strength, psi.	200 min	ASTM D 412
Elongation, %	450 min	ASTM D 412
Tack Free Time, minutes.	20 max.	ASTM C 679
Cure Time ¼" bead, hrs	24 max	ASTM C 679
Resistance to U.V.	No cracking, chalking, or degradation	ASTM C793
VOC (g/L)	0	ATSM D 3960

Any rips, tears, or bond failure will be cause for rejection.

The two part epoxy primer shall be supplied for application to the vertical faces of the joint opening. The supplied primer shall be equally as effective when bonded to concrete or steel. This primer shall meet the following criteria:

Table 3
Physical Properties of Preformed Silicone Joint System Primer

Property	Requirement	Test Method
Viscosity (cps)	44	ASTM D 2196
Color	Light Amber	Visual
Solids (%)	41	ASTM D 4209
Specific Gravity	0.92	ATSM D 1217
Product Flash Point (°F, T.C.C.)	48	ATSM D 56
Package Stability	N/A	One year in tightly sealed containers
Cleaning	N/A	Mineral Spirits
VOC (g/L)	520	ATSM D 3960

- (a) Preformed Inverted EPDM Joint Seal. The preformed inverted EPDM joint seal used for this item shall conform to the following specifications:

Table 1
Physical Properties of Preformed Silicone Gland

Property	Requirement	Test Method
Rated Movement Capability	Up To 5 inch total	N/A
Tensile Strength, psi.	1200 psi min	ASTM D 412
Elongation	400 % min	ASTM D 412
Tear (Die C)	150 pli. min	ASTM D 624
Durometer Content	50 +/- 5 max	ASTM D 2240
Water Resistance (70 hrs @ 100c)	10% max	ASTM D 471
Ozone Resistance	100 min	ASTM D 1171

Table 2
Physical Properties of the V-Epoxy-R

V-Epoxy-R adhesive meets the requirements of ASTM C881 Type III, Grade 2. The adhesive shall also have the following properties:

Property	Requirement	Test Method
Color	Gray	Visual
Viscosity	45,000 CP (typ.)	N/A
Gel Time (minutes)	30 min.	ASTM C 881
Shelf Life (Separate Sealed Containers)	12 Months	N/A
Resistance to U.V.	No cracking, chalking, or degradation	ASTM C793
VOC (g/L)	0	ATSM D 3960

Any rips, tears, or bond failure will be cause for rejection.

(e) Bonded Preformed Joint Seal. This joint system shall consist of preformed elastomeric seal bonded to the side walls of the joint opening using an adhesive as specified by the Manufacturer of the joint seal.

The bonded preformed joint seal shall be according to Table 1 of ASTM D2628 with the following exceptions: Compression set shall not be over 40 percent when tested according to Method B (Modified) of ASTM D 395 after 70 hours at 212 °F (100 °C). The Compression-Deflection requirement will not apply to the bonded preformed joint seal.

The adhesive shall be epoxy base, dual component, which resists salt, diluted acids, alkalis, solvents, greases, oils, moisture, sunlight and weathering. Temperatures up to 200 °F (93 °C) shall not reduce bond strength. At 68 °F (20 °C), the bond strength shall be a minimum of 1000 psi (6.9 MPa) within 24 hours.

Any primers or cleaning solutions used on the faces of the joint or on the profile of the sides of the bonded preformed joint seal shall be supplied by the manufacturer of the bonded preformed joint seal.

Any additional installation materials and adhesive for splicing joint sections shall be as supplied by the manufacturer of the preformed joint seal.

The Contractor shall submit the Manufacturer's material certification documentation stating that their materials meet the applicable requirements of this specification for the joint seal(s) installed.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall furnish the Engineer with the manufacturer's product information and installation procedures at least two weeks prior to installation.

The minimum ambient air temperature in which the joint seal can be installed is 40° F (4.4° C) and rising, except for bonded preformed joint seals which shall not be installed when temperatures below 50 °F (10 °C) are predicted within a 48 hour period.

The joint surface shall be completely dry before installing the Joint Seal. For newly placed concrete, the concrete shall be fully cured and allowed to dry out a minimum of seven additional days prior to placement of the seal. Cold, wet, inclement weather will require an extended drying time.

The Joint Seal shall not be installed immediately after precipitation or if precipitation is forecasted for the day. Joint preparation and installation of Joint Seal shall be done during the same day.

Surface Preparation. Surface preparation shall be according to the joint seal manufacturer's written instructions.

After surface preparation is completed, the joint shall be cleaned of debris using compressed air with a minimum pressure of 90 psi (620 kPa). The air compressor shall be equipped with traps to prevent the inclusion of water and/or oil in the air line. The compressed air shall be according to the cleanliness requirements of ASTM D 4285.

When priming is required per the manufacturer's instruction, this operation shall immediately follow cleaning.

Joint Installation. The Joint installation shall be per the manufacturer's instructions; special attention shall be given to insure the joint seal is properly recessed below the top of the riding surface as recommended by the manufacturer.

For bonded joint seals the seal shall be inserted into the joint and held tightly against both sides of the joint until sufficient bond strength has been developed to resist the expected expansion forces.

Opening to traffic. As these joint systems are supposed to be recessed below the top of the riding surface, there should be no restriction, based on the joint seal installation, on when these joints can be reopened to traffic.

Method of Measurement. The installed prefabricated joint seal will not be measured for payment.

Basis of Payment. The prefabricated joint seal will not be paid for separately but shall be considered included in the cost of the adjacent concrete work involved.

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.