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Letting August 1, 2025

Notice to Bidders, Specifications and Proposal



**Contract No. 62N97
COOK County
Section 2021-060-SW-TS&N
Route FAP 559
Project HSIP-UCZX(187)
District 1 Construction Funds**

Prepared by

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Checked by

(Printed by authority of the State of Illinois)



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. August 1, 2025 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. 62N97
COOK County
Section 2021-060-SW-TS&N
Project HSIP-UCZX(187)
Route FAP 559
District 1 Construction Funds**

(2,965-Ft) Intersection improvement project consists of earth excavation, construction of storm sewers and drainage structures, combination curb and gutter, HMA base course widening, resurfacing with binder and surface courses, modernization of traffic signals, channelization with thermoplastic pavement markings. Location: IL 58 (Golf Rd) at Barrington Road and at Hoffman Estates Drive, located within the Village of Hoffman Estates.

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

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

By Order of the
Illinois Department of Transportation

Gia Biagi,
Secretary

INDEX
 FOR
 SUPPLEMENTAL SPECIFICATIONS
 AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2025

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-22) (Revised 1-1-25)

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2022, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAP Route 559 (IL 58), Project HSIP-UCZX(187), Section 2021-060-SW-TS&N, Cook County, Contract No. 62N97 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

FAP Route 559 (IL 58)
Project HSIP-UCZX(187)
Section 2021-060-SW-TS&N
Cook County
Contract No. 62N97

LOCATION OF PROJECT

The project is located at the intersection of Illinois Route 58 (F.A.P. 559) and Barrington Road. This project begins at a point on the centerline of IL Route 58 (F.A.P. 559) approximately 0.344 miles west of Barrington Rd in Village of Hoffman Estates in Cook County and extends in a northeasterly direction for a distance of approximately 0.562 miles.

DESCRIPTION OF PROJECT

This is an intersection improvement project and the work to be performed under this contract consists of earth excavation, construction of storm sewers and drainage structures, combination curb and gutter, HMA base course widening, resurfacing with binder and surface courses, modernization of traffic signals, channelization with thermoplastic pavement markings and all incidental and collateral work necessary to complete the project as shown on the plans and as described within.

MAINTENANCE OF ROADWAYS (D1)

Effective: September 30, 1985

Revised: November 1, 1996

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

If items of work have not been provided in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

PUBLIC CONVENIENCE AND SAFETY (D1)

Effective: May 1, 2012

Revised: July 15, 2012

Add the following to the end of the fourth paragraph of Article 107.09:

“If the holiday is on a Saturday or Sunday, and is legally observed on a Friday or Monday, the length of Holiday Period for Monday or Friday shall apply.”

Add the following sentence after the Holiday Period table in the fourth paragraph of Article 107.09:

“The Length of Holiday Period for Thanksgiving shall be from 5:00 AM the Wednesday prior to 11:59 PM the Sunday After”

Delete the fifth paragraph of Article 107.09 of the Standard Specifications:

“On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical.”

STATUS OF UTILITIES (D1)

Effective: June 1, 2016

Revised: April 1, 2025

Utility companies and/or municipal owners located within the construction limits of this project have provided the following information regarding their facilities and the proposed improvements. The tables below contain a description of specific conflicts to be resolved and/or facilities which will require some action on the part of the Department's contractor to proceed with work. Each table entry includes an identification of the action necessary and, if applicable, the estimated duration required for the resolution.

UTILITIES TO BE ADJUSTED

Conflicts noted below have been identified by following the suggested staging plan included in the contract. The company has been notified of all conflicts and will be required to obtain the necessary permits to complete their work; in some instances, resolution will be a function of the construction staging. The responsible agency must relocate, or complete new installations as noted below; this work has been deemed necessary to be complete for the Department's contractor to then work in the stage under which the item has been listed.

Pre-Stage

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Barrington Rd Sta 20+40, 87' Lt	Handhole & Sign	Existing anode test vault and sign is in conflict with the proposed widening and roadway improvements. The anode test valve and sign will need to be relocated prior to beginning construction.	NSMJAWA	Contractor for NSMJAWA to relocate. XXX Days Total
IL 58 Sta 50+55, 55' Rt	Manhole	Existing manhole is in conflict with the proposed widening and roadway improvements. Manhole will need to be relocated or removed prior to beginning construction.	UNKNOWN	Contractor for _____ to relocate. XXX Days Total

IL 58 Sta 49+00 to Sta 57+08, 46' Lt to 52' Lt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed widening, drainage, traffic signal and roadway improvements. Existing underground fiber optic will need to be relocated prior to beginning construction.	MCI	Contractor for MCI to relocate. XXX Days Total
IL 58 Sta 57+08 to Sta 57+15, 46' Lt to 48' Rt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed roadway widening, drainage, and underdrain improvements. Existing underground fiber optic will need to be relocated prior to beginning construction.	MCI	Contractor for MCI to relocate. XXX Days Total
IL 58 Sta 57+15, 48' Rt	Handhole	Existing handhole is in conflict with the proposed grading improvements. Handhole will need to be relocated prior to beginning construction.	MCI	Contractor for MCI to relocate. XXX Days Total
IL 58 Sta 57+14, 61' Rt	Marker	Existing marker is in conflict with the proposed grading improvements. Marker will need to be relocated prior to beginning construction.	MCI	Contractor for MCI to relocate. XXX Days Total
IL 58	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed	MCI	Contractor for MCI to relocate. XXX Days Total

Sta 57+15 to Sta 58+79, Approx. 48' Rt		<p>drainage improvements.</p> <p>Existing underground fiber optic will need to be relocated prior to beginning construction.</p>		
Barrington Rd Sta 18+60 to Sta 20+75, 54' Rt to 58' Rt	Underground Fiber Optic	<p>Existing underground fiber optic is in conflict with the proposed roadway widening, drainage, underdrain, and traffic signal improvements.</p> <p>Existing underground fiber optic will need to be relocated prior to beginning construction.</p>	MCI	<p>Contractor for MCI to relocate. XXX Days Total</p>
Barrington Rd Sta 20+76, 56' Rt	Underground Fiber Optic	<p>Existing underground fiber optic connects to ComEd pole that is in conflict with the proposed pavement widening.</p> <p>Existing underground fiber optic will need to be relocated prior to beginning construction.</p>	MCI	<p>Contractor for MCI to relocate. XXX Days Total</p>
IL 58 Sta 50+75 to Sta 57+41, Approx. 42' Rt to 45' Rt	Underground Gas	<p>Existing gas main is in conflict with the proposed widening, drainage, and traffic signal improvements.</p> <p>Existing gas main will need to be relocated prior to beginning construction.</p>	Nicor	<p>Contractor for Nicor to relocate. XXX Days Total</p>
IL 58 Sta 52+25, Approx. 48' Rt	Underground Gas	<p>Existing gas main is in conflict with the proposed drainage improvements.</p>	Nicor	<p>Contractor for Nicor to relocate. XXX Days Total</p>

		Existing gas main will need to be relocated prior to beginning construction.		
IL 58 Sta 53+70, Approx. 53' Lt	Underground Gas	Existing gas main is in conflict with the proposed drainage improvements. Existing gas main will need to be relocated prior to beginning construction.	Nicor	Contractor for Nicor to relocate. XXX Days Total
IL 58 Sta 55+60, Approx. 50' Lt to 80' Lt	Underground Gas	Existing gas main is in conflict with the proposed drainage and traffic signal improvements. Existing gas main will need to be relocated prior to beginning construction.	Nicor	Contractor for Nicor to relocate. XXX Days Total
IL 58 Sta 56+30, 44' Rt to 75' Rt	Underground Gas	Existing gas main is in conflict with the proposed drainage and traffic signal improvements. Existing gas main will need to be relocated prior to beginning construction.	Nicor	Contractor for Nicor to relocate. XXX Days Total
IL 58 Sta 50+60, Approx. 72' Lt	Power Pole	Existing power pole is in conflict with the proposed pavement widening. Power pole will need to be relocated prior to beginning construction.	Com Ed	Contractor for Com Ed to relocate. XXX Days Total
IL 58 Sta 50+49 to Sta 51+09, Approx. 65' Lt	Underground Electric	Existing underground electric cable is in conflict with the proposed widening,	Com Ed	Contractor for Com Ed to relocate. XXX Days Total

		underdrain, and sidewalk improvements. Existing underground cable will need to be relocated prior to beginning construction.		
IL 58 Sta 50+49, 64' Lt	Manhole	Existing manhole is in conflict with the proposed widening. Existing manhole will need to be relocated/adjusted prior to beginning construction.	Com Ed	Contractor for Com Ed to relocate. XXX Days Total
IL 58 Sta 50+65 to 51+50, Approx. 56' Lt	Underground 6" x 12" Duct	Existing underground duct is in conflict with the proposed widening and underdrain. All electrical and data connections for existing red light running camera to be removed prior to construction.	Com Ed / Village of Hoffman Estates	Contractor for Com Ed / Village of Hoffman Estates to relocate. XXX Days Total
Barrington Rd Sta 20+62 to Sta 22+50, Approx. 58' Rt	Underground 6" x 12" Duct	Existing underground duct is in conflict with the proposed widening, underdrain, and traffic signal improvements. All electrical and data connections for existing red light running camera to be removed prior to construction.	Com Ed / Village of Hoffman Estates	Contractor for Com Ed / Village of Hoffman Estates to relocate. XXX Days Total
Barrington Rd Sta 17+69 to 20+66, Approx. 47' Rt	Underground Electric	Existing underground electric cable is in conflict with the proposed widening,	Com Ed	Contractor for Com Ed to relocate. XXX Days Total

		underdrain, and traffic signal improvements. Existing underground cable will need to be relocated prior to beginning construction.		
Barrington Rd Sta 20+66 to Sta 21+25, Approx. 45' Rt	Underground Electric	Existing underground electric cable is in conflict with the proposed widening, sidewalk, underdrain, and traffic signal improvements. Existing underground electric cable will need to be relocated prior to beginning construction.	Com Ed	Contractor for Com Ed to relocate. XXX Days Total
IL 58 Sta 50+60, Approx. 71' Lt	Aerial Cable	Existing aerial cable attached to ComEd pole is in conflict with the proposed pavement widening. Aerial cable will need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 50+61, 75' Lt	Manhole	Existing manhole is in conflict with the proposed widening and roadway improvements. Manhole will need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 50+61 to Sta 50+90, Approx. 75' Lt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed widening, traffic signal, and sidewalk improvements.	AT&T	Contractor for AT&T to relocate. XXX Days Total

		Existing underground fiber optic will need to be relocated prior to beginning construction.		
IL 58 Sta 50+61 to 52+30, 53' Rt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed drainage, grading, and traffic signal improvements. Existing underground fiber optic will need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 52+30, 53' Rt	Handhole	Existing handhole is in conflict with the proposed grading. Handhole will need to be relocated prior to construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 52+33, 63' Rt	Splice Box	Existing splice box is located within the vicinity of the proposed sidewalk improvements. Splice box may need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 52+30 to Sta 56+80, 46' Rt to 55' Rt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed drainage, widening, and traffic signal improvements. Existing underground fiber optic will need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total

IL 58 Sta 56+80 to Sta 56+85, 46' Rt to 68' Lt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed drainage, widening, and traffic signal improvements. Existing underground fiber optic will need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 56+88 to Sta 57+24, 70' Lt to 70' Rt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed drainage and widening improvements. Existing underground fiber optic will need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 56+88 to Sta 57+12, 70' Lt to 5' Rt	Underground Fiber Optic	Existing underground fiber optic is in conflict with the proposed drainage and widening, and traffic signal improvements. Existing underground fiber optic will need to be relocated prior to beginning construction	Unknown	Contractor for ____ to relocate. XXX Days Total
IL 58 Sta 56+29, 64' Rt	Splice Box	Existing splice box is in conflict with the proposed sidewalk improvements. Splice box will need to be relocated prior to beginning construction.	AT&T	Contractor for AT&T to relocate. XXX Days Total
IL 58 Sta 58+54 to Sta 60+08, Varies 40' Rt to 64' Rt	Underground Telephone	Existing underground telephone is in conflict with the proposed	AT&T	Contractor for AT&T to relocate. XXX Days Total

		<p>drainage and widening improvements.</p> <p>Existing underground telephone will need to be relocated prior to beginning construction.</p>		
<p>IL 58 Sta 50+59, 79' Lt</p>	Marker	<p>Existing marker is in conflict with the proposed roadway improvements.</p> <p>Marker will need to be relocated prior to beginning construction.</p>	AT&T	<p>Contractor for AT&T to relocate. XXX Days Total</p>
<p>Barrington Rd Sta 19+20 to Sta 19+51, Approx. 64' Rt</p>	Underground Fiber Optic	<p>Existing underground fiber optic is in conflict with the proposed traffic signal and sidewalk improvements.</p> <p>Existing underground fiber optic will need to be relocated prior to beginning construction.</p>	AT&T	<p>Contractor for AT&T to relocate. XXX Days Total</p>
<p>Barrington Rd Sta 20+79 to Sta 21+05, Approx. 52' Rt</p>	Underground Fiber Optic	<p>Existing underground fiber optic is in conflict with the proposed traffic signal and sidewalk improvements.</p> <p>Existing underground fiber optic will need to be relocated prior to beginning construction.</p>	AT&T	<p>Contractor for AT&T to relocate. XXX Days Total</p>
<p>Barrington Rd Sta 20+76, 56' Rt</p>	Underground CTV	<p>Existing underground CTV connects to ComEd pole that is in conflict with the proposed pavement widening.</p>	Comcast	<p>Contractor for Comcast to relocate. XXX Days Total</p>

		Existing underground CTV will need to be relocated prior to beginning construction.		
Barrington Rd Sta 19+00 to Sta 19+54, Approx. 48' Rt	Underground CTV	Existing underground CTV is in conflict with the proposed widening, underdrain, and traffic signal improvements. Existing underground CTV will need to be relocated prior to beginning construction.	Comcast	Contractor for Comcast to relocate. XXX Days Total
Barrington Rd Sta 20+15 to Sta 20+76, Varies 52' Rt to 55' Rt	Underground CTV	Existing underground CTV is in conflict with the proposed widening, underdrain, and traffic signal improvements. Existing underground CTV may need to be relocated prior to beginning construction.	Comcast	Contractor for Comcast to relocate. XXX Days Total

Stage 3

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
IL 58 Sta 49+00, 44' Lt	Handhole and Marker	Existing handhole and marker is in conflict with the proposed grading. The handhole and marker will need to be adjusted during Stage 3.	MCI	Contractor for MCI to adjust. XXX Days Total

Pre-Stage: _____ Days Total Installation
Stage 3: _____ Days Total Installation

The following contact information is what was used during the preparation of the plans as provided by the Agency/Company responsible for resolution of the conflict.

Agency/Company Responsible to Resolve Conflict	Name of contact	Phone	E-mail address
AT&T	Tom Laskowski	630-573-5643	TI7895@att.com
ComEd	James Campbell		James.CampbellIII@ComEd.com
NSMJAWA	Ramesh Kanapareddy	847-981-4083	rkanapareddy@nsmjawa.com
Comcast			
MCI			

UTILITIES TO BE WATCHED AND PROTECTED

The areas of concern noted below have been identified by following the suggested staging plan included for the contract. The information provided is not a comprehensive list of all remaining utilities, but those which during coordination were identified as ones which might require the Department's contractor to take into consideration when making the determination of the means and methods that would be required to construct the proposed improvement. In some instances, the contractor will be responsible to notify the owner in advance of the work to take place so necessary staffing on the owner's part can be secured.

Pre-Stage

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Barrington Rd Sta 17+67 to Sta 25+07, Varies 65' Lt to 86' Lt	30" High Pressure Water Main	The Contractor is alerted there is an existing high pressure water main running along the left side of Barrington Rd. High pressure water main shall be protected from damage by the Contractor during construction.	NSMJAWA
IL 58 Sta 56+18 to Sta 56+22, 81' Lt to 96' Rt	12" Water Main	The Contractor is alerted there is an existing water main running under IL 58. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
IL 58 Sta 51+09 to Sta 53+17, Approx. 65' Lt	Underground Electric 3' x 2' Concrete Conduit	The Contractor is alerted there is underground electric cable in conduit running along the left side of IL 58. Underground electric cable shall be protected from damage by the Contractor during construction.	Com Ed

Stage 1

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
IL 58 Sta 56+00 to Sta 62+43, Varies 73' Lt to 85' Lt	16" Water Main	The Contractor is alerted there is an existing water main running along the left side of IL 58. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
IL 58 Sta 56+18 to Sta 56+22, 81' Lt to 96' Rt	12" Water Main	The Contractor is alerted there is an existing water main running under IL 58. Water main shall be protected from damage by the Contractor during construction and installation of proposed traffic signal foundation at Sta 56+27, 62' Lt.	Village of Hoffman Estates
IL 58 Sta 61+69 to Sta 61+65, 77' Lt to 80' Rt	12" Water Main	The Contractor is alerted there is an existing water main running under IL 58. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
IL 58 Sta 55+54, 44' Rt to 54' LT	Underground Gas	The Contractor is alerted there is an underground gas main running under IL 58. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
Barrington Rd Sta 19+60 to Sta 25+07, 46' Rt to 79' Rt	Underground Gas	The Contractor is alerted there is an underground gas main running along the right side of Barrington Rd. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
IL 58 Sta 54+96 to Sta 62+43, Approx. 69' Lt	Aerial Cable & Power Poles	The Contractor is alerted there is existing aerial cable is running along the left side of IL 58.	Com Ed

		Aerial cable and power poles shall be protected from damage by the Contractor during construction.	
IL 58 Sta 62+38 to Sta 62+47, 68' Lt to 72' Rt	Underground Electric	The Contractor is alerted there is underground electric cable running under IL 58. Underground electric cable shall be protected from damage by the Contractor during construction.	Com Ed
Barrington Rd Sta 19+54 to Sta 20+15, Varies 48' Rt to 52' Rt	Underground CTV	The Contractor is alerted there is underground CTV running along the right side of Barrington Rd. Underground CTV shall be protected from damage by the Contractor during construction.	Comcast
IL 58 Sta 55+20 to Sta 56+88, Varies 75' Lt to 70' Lt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the left side of IL 58. Underground fiber optic shall be protected from damage by the Contractor during construction.	AT&T
IL 58 Sta 60+39 to Sta 62+44, Approx. 70' Lt	Underground Telephone	The Contractor is alerted there is underground telephone running along the left side of IL 58. Underground telephone shall be protected from damage by the Contractor during construction.	AT&T

Stage 2

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Barrington Rd Sta 17+67 to Sta 25+07, Varies 65' Lt to 86' Lt	30" High Pressure Water Main	The Contractor is alerted there is an existing high pressure water main running along the left side of Barrington Rd. High pressure water main shall be protected from damage by the Contractor during construction.	NSMJAWA
IL 58 Sta 56+18 to Sta 56+22, 81' Lt to 96' Rt	12" Water Main	The Contractor is alerted there is an existing water main running under IL 58. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
IL 58 Sta 61+69 to Sta 61+65, 77' Lt to 80' Rt	12" Water Main	The Contractor is alerted there is an existing water main running under IL 58. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
Barrington Rd Sta 16+84 to Sta 17+81, Approx 45' Rt	12" Water Main	The Contractor is alerted there is an existing water main running along the right side of Barrington Rd. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
Barrington Rd Sta 17+64 to Sta 18+60, 60' Rt to 58' Rt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the right side of Barrington Rd. Underground Fiber Optic shall be protected from damage by the Contractor during construction.	MCI
IL 58 Sta 58+79 to Sta 62+23, 46' Rt to 50' Rt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the right side of IL 58. Underground Fiber Optic shall be protected from damage by the Contractor during construction.	MCI

IL 58 Sta 57+40 to Sta 62+42, Approx. 42' Rt to 44' Rt	Underground Gas	The Contractor is alerted there is an underground gas main running along the right side of IL 58. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
IL 58 Sta 53+70, 45' Rt to 70' Lt	Underground Gas	The Contractor is alerted there is an underground gas main running under IL 58. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
IL 58 Sta 55+54, 44' Rt to 54' LT	Underground Gas	The Contractor is alerted there is an underground gas main running under IL 58. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
IL 58 Sta 52+25, 49' Rt to 90' Rt	Underground Gas	The Contractor is alerted there is an underground gas main running under the proposed driveway and sidewalk improvements. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
IL 58 Sta 62+42, 42' Rt to 75' Rt	Underground Gas	The Contractor is alerted there is an underground gas main running under the proposed sidewalk improvements. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
Barrington Rd Sta 19+60 to Sta 25+07, 46' Rt to 79' Rt	Underground Gas	The Contractor is alerted there is an underground gas main running along the right side of Barrington Rd. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
IL 58 Sta 56+29 to Sta 62+47, Varies 66' Rt to 75' Rt	Underground Electric	The Contractor is alerted there is underground electric cable running along the right side of IL 58.	Com Ed

		Underground electric cable shall be protected from damage by the Contractor during construction.	
IL 58 Sta 62+38 to Sta 62+47, 68' Lt to 72' Rt	Underground Electric	The Contractor is alerted there is underground electric cable running under IL 58. Underground electric cable shall be protected from damage by the Contractor during construction.	Com Ed
Barrington Rd Sta 17+62 to Sta 18+60, Approx. 55' Rt	Aerial Cable & Power Poles	The Contractor is alerted there is existing aerial cable running along the right side of Barrington Rd. Aerial cable and power poles shall be protected from damage by the Contractor during construction.	Com Ed
IL 58 Sta 56+29 to Sta 58+54, Varies 64' Rt to 72' Rt	Underground Telephone	The Contractor is alerted there is underground telephone running along the right side of IL 58. Underground telephone shall be protected from damage by the Contractor during construction.	AT&T
IL 58 Sta 60+08 to Sta 62+36. Varies 39' Rt to 89' Rt	Underground Telephone	The Contractor is alerted there is underground telephone running along the right side of IL 58. Underground telephone shall be protected from damage by the Contractor during construction.	AT&T
IL 58 Sta 61+70 to Sta 62+34, Varies 60' Rt to 89' Rt	Underground Telephone	The Contractor is alerted there is underground telephone running along the right side of IL 58. Underground telephone shall be protected from damage by the Contractor during construction.	AT&T
IL 58 Sta 60+10 to Sta 62+47, Varies 60' Rt to 84' Rt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the right side of IL 58. Underground Fiber Optic shall be protected from damage by the Contractor during construction.	AT&T

Barrington Rd Sta 18+62 to Sta 19+20, Varies 56' Rt to 60' Rt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the right side of Barrington Rd. Underground fiber optic shall be protected from damage by the Contractor during construction.	AT&T
Barrington Rd Sta 17+73 to Sta 19+00, Varies 46' Rt to 52' Rt	Underground CTV	The Contractor is alerted there is underground CTV running along the right side of Barrington Rd. Underground CTV shall be protected from damage by the Contractor during construction.	Comcast

Stage 3

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Barrington Rd Sta 20+75, 86' Lt	Manhole	The Contractor is alerted there is an existing manhole located along the left side of Barrington Rd. Manhole shall be protected from damage by the Contractor during construction.	NSMJAWA
Barrington Rd Sta 17+67 to Sta 25+07, Varies 65' Lt to 86' Lt	30" High Pressure Water Main	The Contractor is alerted there is an existing high pressure water main running along the left side of Barrington Rd. High pressure water main shall be protected from damage by the Contractor during construction.	NSMJAWA
IL 58 Sta 41+12 to Sta 49+00, 36' Lt to 44' Lt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the left side of IL 58. Underground Fiber Optic shall be protected from damage by the Contractor during construction.	MCI
IL 58 Sta 53+70, 45' Rt to 70' Lt	Underground Gas	The Contractor is alerted there is an underground gas main running under IL 58.	Nicor

		Underground gas main shall be protected from damage by the Contractor during construction.	
Barrington Rd Sta 19+60 to Sta 25+07, 46' Rt to 79' Rt	Underground Gas	<p>The Contractor is alerted there is an underground gas main running along the right side of Barrington Rd.</p> <p>Underground gas main shall be protected from damage by the Contractor during construction.</p>	Nicor
IL 58 Sta 33+62 to Sta 49+08, Approx. 48' Lt	Aerial Cable & Power Poles	<p>The Contractor is alerted there is existing aerial cable and power poles running along the left side of IL 58.</p> <p>Aerial cable and power poles shall be protected from damage by the Contractor during construction.</p>	Com Ed
IL 58 Sta 51+55 to Sta 54+96, Approx. 69' Lt	Aerial Cable & Power Poles	<p>The Contractor is alerted there is existing aerial cable is running along the left side of IL 58.</p> <p>Aerial cable and power poles shall be protected from damage by the Contractor during construction.</p>	Com Ed
IL 58 Sta 51+09 to Sta 53+17, Approx. 65' Lt	Underground Electric 3' x 2' Concrete Conduit	<p>The Contractor is alerted there is underground electric cable in conduit running along the left side of IL 58.</p> <p>Underground electric cable shall be protected from damage by the Contractor during construction.</p>	Com Ed
IL 58 Sta 54+25 to Sta 54+96, Approx. 66' Lt	Underground Electric	<p>The Contractor is alerted there is underground electric cable running along the left side of IL 58.</p> <p>Underground electric cable shall be protected from damage by the Contractor during construction.</p>	Com Ed
Barrington Rd Sta 22+51 to Sta 24+73, Approx. 55' Rt	Aerial Cable & Power Poles	<p>The Contractor is alerted there is existing aerial cable is running along the right side of Barrington Rd.</p> <p>Aerial cable and power poles shall be protected from damage by the Contractor during construction.</p>	Com Ed

Barrington Rd Sta 21+25 to Sta 24+89, 45' Rt to 50' Rt	Underground Electric	The Contractor is alerted there is underground electric cable running along the right side of Barrington Rd Underground electric cable shall be protected from damage by the Contractor during construction.	Com Ed
Barrington Rd Sta 22+42, 56' Rt	Junction Box	The Contractor is alerted there is an existing junction box located along the right side of Barrington Rd. Junction Box shall be protected from damage by the Contractor during construction.	Com Ed
IL 58 Sta 50+90 to Sta 55+20, Varies 75' Lt to 70' Lt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the left side of IL 58. Underground fiber optic shall be protected from damage by the Contractor during construction.	AT&T
IL 58 Sta 54+26 to Sta 54+96, Approx. 70' Lt	Underground Telephone	The Contractor is alerted there is underground telephone running along the left side of IL 58. Underground telephone shall be protected from damage by the Contractor during construction.	AT&T
Barrington Rd Sta 21+00 to Sta 25+00, Approx. 52' Rt	Underground Fiber Optic	The Contractor is alerted there is underground fiber optic running along the right side of Barrington Rd. Underground fiber optic shall be protected from damage by the Contractor during construction.	AT&T

Stage 4

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Barrington Rd Sta 17+67 to Sta 25+07, Varies 65' Lt to 86' Lt	30" High Pressure Water Main	The Contractor is alerted there is an existing high pressure water main running along the left side of Barrington Rd. High pressure water main shall be protected from damage by the Contractor during construction.	NSMJAWA
IL 58 Sta 56+18 to Sta 56+22, 81' Lt to 96' Rt	12" Water Main	The Contractor is alerted there is an existing water main running under IL 58. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
IL 58 Sta 61+69 to Sta 61+65, 77' Lt to 80' Rt	12" Water Main	The Contractor is alerted there is an existing water main running under IL 58. Water main shall be protected from damage by the Contractor during construction.	Village of Hoffman Estates
IL 58 Sta 53+70, 45' Rt to 70' Lt	Underground Gas	The Contractor is alerted there is an underground gas main running under IL 58. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
IL 58 Sta 55+54, 44' Rt to 54' LT	Underground Gas	The Contractor is alerted there is an underground gas main running under IL 58. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor
Barrington Rd Sta 19+60 to Sta 25+07, 46' Rt to 79' Rt	Underground Gas	The Contractor is alerted there is an underground gas main running along the right side of Barrington Rd. Underground gas main shall be protected from damage by the Contractor during construction.	Nicor

Barrington Rd Sta 19+54 to Sta 20+15, Varies 48' Rt to 52' Rt	Underground CTV	The Contractor is alerted there is underground CTV running along the right side of Barrington Rd. Underground CTV shall be protected from damage by the Contractor during construction.	Comcast
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The following contact information is what was used during the preparation of the plans as provided by the owner of the facility.

Agency/Company Responsible to Resolve Conflict	Name of contact	Phone	E-mail address
AT&T	Tom Laskowski	630-573-5643	TI7895@att.com
ComEd	James Campbell		James.CampbellIII@ComEd.com
NSMJAWA	Ramesh Kanapareddy	847-981-4083	rkanapareddy@nsmjawa.com
Comcast			
MCI			

The above represents the best information available to the Department and is included for the convenience of the bidder. The days required for conflict resolution should be considered in the bid as this information has also been factored into the timeline identified for the project when setting the completion date. The applicable portions of the Standard Specifications for Road and Bridge Construction shall apply.

Estimated duration of time provided above for the first conflicts identified will begin on the date of the executed contract regardless of the status of the utility relocations. The responsible agencies will be working toward resolving subsequent conflicts in conjunction with contractor activities in the number of days noted.

The estimated relocation duration must be part of the progress schedule submitted by the contractor. A utility kickoff meeting will be scheduled between the Department, the Department's contractor, and the utility companies when necessary.

The contractor is responsible for contacting JULIE (or DIGGER within the City of Chicago) prior to any excavation work. Please note that IDOT electrical facilities are not part of the one-call locating services, such as JULIE or DIGGER.

If the contract requires the services of an electrical contractor, it is the contractor's responsibility, at their own expense, to locate existing IDOT electrical facilities before commencing work. For contracts that do not require an electrical contractor, the contractor may request one free locate of IDOT electrical facilities by contacting the Department's Electrical Maintenance Contractor. Additional locate requests will be at the contractor's expense.

The Department's Electrical Maintenance Contractor must be notified at least 72 hours in advance of the work by calling 773-287-7600 or emailing dispatch@meade100.com to arrange for the locating of underground electrical facilities.

Please note, the marking of underground facilities does not absolve the contractor of their responsibility to repair or replace any facilities damaged during construction at their expense.

WORK RESTRICTIONS

No permanent lane closures are allowed in 2025. Permanent lane closures are allowed starting from April 1, 2026.

COMPLETION DATE PLUS WORKING DAYS (D1)

Effective: September 30, 1985

Revised: January 1, 2007

Revise Article 108.05 (b) of the Standard Specifications as follows:

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on, **October 31, 2026** except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within **10** working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

Article 108.09 or the Special Provision for "Failure to Complete the Work on Time", if included in this contract, shall apply to both the completion date and the number of working days.

EMBANKMENT II (D1)

Effective: March 1, 2011

Revised: November 1, 2013

Description. This work shall be according to Section 205 of the Standard Specifications except for the following.

Material. Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present. The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

CONSTRUCTION REQUIREMENTS

Samples. Embankment material shall be sampled and tested before use. The contractor shall identify embankment sources, and provide equipment as the Engineer requires, for the collection of samples from those sources. Samples will be furnished to the Geotechnical Engineer a minimum of three weeks prior to use in order that laboratory tests for compaction can be performed. Embankment material placement cannot begin until tests are completed.

Placing Material. In addition to Article 202.03, broken concrete, reclaimed asphalt with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities shall be placed in 6 inches (150 mm) lifts and disked with the underlying lift until a uniform homogenous material is formed. This process also applies to the overlaying lifts. The disk must have a minimum blade diameter of 24 inches (600 mm).

When embankments are to be constructed on hillsides or existing slopes that are steeper than 3H:1V, steps shall be keyed into the existing slope by stepping and benching as shown in the plans or as directed by the Engineer.

Compaction. Soils classification for moisture content control will be determined by the Soils Inspector using visual field examination techniques and the IDH Textural Classification Chart.

When tested for density in place each lift shall have a maximum moisture content as follows.

- a) A maximum of 110 percent of the optimum moisture for all forms of clay soils.
- b) A maximum of 105 percent of the optimum moisture for all forms of clay loam soils.

Stability. The requirement for embankment stability in article 205.04 will be measured with a Dynamic Cone Penetrometer (DCP) according to the test method in the IDOT Geotechnical Manual. The penetration rate must be equal or less than 1.5 inches (38 mm) per blow.

Basis of Payment. This work will not be paid separately but will be considered as included in the various items of excavation.

BOLLARD REMOVAL

Description. This work shall consist of the removal and satisfactory disposal of existing bollards and drop gates as shown in the plans or as directed by the Engineer.

Construction Requirements. This work shall be done in accordance with Article 501.05 of the Standard Specifications. The voids left by the removal of the bollards shall be filled with an aggregate fill meeting Article 1003.04 of the Standard Specifications and compacted to the satisfaction of the Engineer.

Method of Measurement. Removal of existing bollards and drop gates will be measured for payment at each location specified.

Basis of Payment. This work will be paid for at the contract unit price per EACH location for BOLLARD REMOVAL.

FRICTION AGGREGATE (D1)

Effective: January 1, 2011
Revised: December 1, 2021

Revise Article 1004.03(a) of the Standard Specifications to read:

“1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA). The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete

Use	Mixture	Aggregates Allowed	
HMA Low ESAL	Stabilized Subbase or Shoulders	<u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete	
HMA High ESAL Low ESAL	Binder IL-19.0 or IL-19.0L SMA Binder	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/}	
HMA High ESAL Low ESAL	C Surface and Binder IL-9.5 IL-9.5FG or IL-9.5L	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}	
HMA High ESAL	D Surface and Binder IL-9.5 or IL-9.5FG	<u>Allowed Alone or in Combination</u> ^{5/} : Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/}	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		25% Limestone	Dolomite
		50% Limestone	Any Mixture D aggregate other than Dolomite
		75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone

Use	Mixture	Aggregates Allowed	
HMA High ESAL	E Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crushed Gravel Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Dolomite ^{2/}	Any Mixture E aggregate
		75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone
75% Crushed Gravel ^{2/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag		
HMA High ESAL	F Surface IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> ^{5/ 6/} : Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Crushed Gravel ^{2/} or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume.”
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80.”

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

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

Add to the end of the first paragraph of Article 440.08 the following:

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

HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D1)

Effective: November 1, 2019

Revised: January 1, 2025

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; Stabilized Subbase IL-19.0	CA 11 ^{1/}
	SMA 12.5 ^{2/}	CA 13 ^{4/} , CA 14, or CA 16
	SMA 9.5 ^{2/}	CA 13 ^{3/4/} or CA 16 ^{3/}
	IL-9.5	CA 16, CM 13 ^{4/}
	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 the fine aggregates and mineral filler to meet the approved mix design and the mix requirements noted herein.
- 3/ The specified coarse aggregate gradations may be blended.
- 4/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.”

Revise Article 1004.03(e) of the Standard Specifications to read:

“(e) Absorption. For SMA the coarse aggregate shall also have water absorption ≤ 2.0 percent.”

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, Stabilized Subbase IL-19.0
	Surface Courses	IL-9.5, IL-9.5FG, SMA 12.5, SMA 9.5”

Revise Note 2. and add Note 6 to Article 1030.02 of the Standard Specifications to read:

“Item	Article/Section
(g)Performance Graded Asphalt Binder (Note 6)	1032
(h)Fibers (Note 2)	

Note 2. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements. Reclaimed Asphalt Shingles (RAS) may be used in Stone Matrix Asphalt (SMA) mixtures designed with an SBA polymer modifier as a fiber additive if the mix design with RAS included meets AASHTO T305 requirements. The RAS shall be from a certified source that produces either Type I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

Note 6. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a full-depth asphalt pavement and SBS PG 76-22 when used as an overlay, except where modified herein. The asphalt binder shall be a SBS PG 76-22 for IL-4.75, except where modified herein..”

Revise table in Article 1030.05(a) of the Standard Specifications to read:

"MIXTURE COMPOSITION (% PASSING)" ^{1/}												
Sieve Size	IL-19.0 mm		SMA 12.5		SMA 9.5		IL-9.5mm		IL-9.5FG		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max	min	max
1 1/2 in. (37.5 mm)												
1 in. (25 mm)		100										
3/4 in. (19 mm)	90	100		100								
1/2 in. (12.5 mm)	75	89	80	100		100		100		100		100
3/8 in. (9.5 mm)				65	90	100	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	60	75 ^{6/}	90	100
#8 (2.36 mm)	20	42	16	24 ^{4/}	16	32 ^{4/}	34 ^{5/}	52 ^{2/}	45	60 ^{6/}	70	90
#16 (1.18 mm)	15	30					10	32	25	40	50	65
#30 (600 μm)			12	16	12	18			15	30		
#50 (300 μm)	6	15					4	15	8	15	15	30
#100 (150 μm)	4	9					3	10	6	10	10	18
#200 (75 μm)	3.0	6.0	7.0	9.0 ^{3/}	7.5	9.5 ^{3/}	4.0	6.0	4.0	6.5	7.0	9.0 ^{3/}
#635 (20 μm)			≤ 3.0		≤ 3.0							
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		1.0		1.0		1.0

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.
- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.
- 4/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.
- 6/ When the mixture is used as a binder, the maximum shall be increased by 0.5 percent passing."

Revise Article 1030.05(b) of the Standard Specifications to read:

- (b) Volumetric Requirements. The target value for the air voids of the HMA shall be 4.0 percent, for IL-4.75 and SMA mixtures it shall be 3.5 percent and for Stabilized Subbase it shall be 3.0 percent at the design number of gyrations. The voids in the mineral aggregate (VMA) and voids filled with asphalt binder (VFA) of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the following requirements.

Mix Design	Voids in the Mineral Aggregate (VMA), % Minimum for Ndesign				
	30	50	70	80	90
IL-19.0		13.5	13.5		13.5
IL-9.5		15.0	15.0		
IL-9.5FG		15.0	15.0		
IL-4.75 ^{1/}		18.5			
SMA-12.5 ^{1/2/5/}				17.0 ^{3/} /16.0 ^{4/}	
SMA-9.5 ^{1/2/5/}				17.0 ^{3/} /16.0 ^{4/}	
IL-19.0L	13.5				
IL-9.5L	15.0				

- 1/ Maximum draindown shall be 0.3 percent according to Illinois Modified AASHTO T 305.
- 2/ The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30°F.
- 3/ Applies when specific gravity of coarse aggregate is ≥ 2.760 .
- 4/ Applies when specific gravity of coarse aggregate is < 2.760 .
- 5/ For surface course, the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone. For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone"

Revise the last paragraph of Article 1102.01 (a) (5) of the Standard Specifications to read:

"IL-4.75 and Stone Matrix Asphalt (SMA) mixtures which contain aggregate having absorptions greater than or equal to 2.0 percent, or which contain steel slag sand, shall have minimum surge bin storage plus haul time of 1.5 hours."

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

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

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

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

- “(3) The Contractor shall take possession of any Department unused backup or dispute resolution HMA mixture samples or density specimens upon notification by the Engineer. The Contractor shall collect the HMA mixture samples or density specimens from the location designated by the Engineer. The HMA mixture samples or density specimens may be added to RAP stockpiles according to Section 1031.”

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

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

Revise the following table and notes in Article 1030.09 (c) of the Standard Specifications to read:

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

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

2/ The air voids target shall be a value equal to or between 3.2 % and 4.8 %.

3/ Allowable limit below minimum design VMA requirement.

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

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

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

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

Add after third sentence of Article 1030.09(b) 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."

Revise Table 1 and Note 4/ of Table 1 in Article 406.07(a) of the Standard Specifications to read:

	Breakdown/Intermediate Roller (one of the following)	Final Roller (one or more of the following)	Density Requirement
IL-9.5, IL-9.5FG, IL-19.0 ^{1/}	V _D , P, T _B , 3W, O _T , O _B	V _S , T _B , T _F , O _T	As specified in Section 1030
IL-4.75 and SMA ^{3/ 4/}	T _B , 3W, O _T	T _F , 3W	As specified in Section 1030
Mixtures on Bridge Decks ^{2/}	T _B	T _F	As specified in Articles 582.05 and 582.06.

"4/ The Contractor shall provide a minimum of two steel-wheeled tandem rollers (T_B), and/or three-wheel (3W) rollers for breakdown, except one of the (T_B) or (3W) rollers shall be 84 inches (2.14 m) wide and a weight of 315 pound per linear inch (PLI) (5.63 kg/mm) and one of the (T_B) or (3W) rollers can be substituted for an oscillatory roller (O_T). T_F rollers shall be a minimum of 280 lb/in. (50 N/mm). The 3W and T_B rollers shall be operated at a uniform speed not to exceed 3 mph (5 km/h), with the drive roll for T_B rollers nearest the paver and maintain an effective rolling distance of not more than 150 ft (45 m) behind the paver."

Add the following after the fourth paragraph of Article 406.13 (b):

"The plan quantities of SMA mixtures shall be adjusted using the actual approved binder and surface Mix Design's G_{mb}."

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

"A test strip of 300 ton (275 metric tons), except for SMA mixtures it will be 400 ton (363 metric ton), will be required for each mixture on each contract at the beginning of HMA production for each construction year according to the Manual of Test Procedures for Materials "Hot Mix Asphalt Test Strip Procedures". At the request of the Producer, the Engineer may waive the test strip if previous construction during the current construction year has demonstrated the constructability of the mix using Department test results."

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

“When a test strip is constructed, the Contractor shall collect and split the mixture according to the document “Hot-Mix Asphalt Test Strip Procedures”. The Engineer, or a representative, shall deliver split sample to the District Laboratory for verification testing. The Contractor shall complete mixture tests stated in Article 1030.09(a). Mixture sampled shall include enough material for the Department to conduct mixture tests detailed in Article 1030.09(a) and in the document “Hot-Mix Asphalt Mixture Design Verification Procedure” Section 3.3. The mixture test results shall meet the requirements of Articles 1030.05(b) and 1030.05(d), except Hamburg wheel tests will only be conducted on High ESAL mixtures during production.”

HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (D1)

Effective: January 1, 2019

Revised: December 1, 2021

Add to Article 1030.05 (d)(3) of the Standard Specifications to read:

“ During mixture design, prepared samples shall be submitted to the District laboratory by the Contractor for verification testing. The required testing, and number and size of prepared samples submitted, shall be according to the following tables.

High ESAL – Required Samples for Verification Testing	
Mixture	Hamburg Wheel and I-FIT Testing ^{1/ 2/}
Binder	total of 3 - 160 mm tall bricks
Surface	total of 4 - 160 mm tall bricks

Low ESAL – Required Samples for Verification Testing	
Mixture	I-FIT Testing ^{1/ 2/}
Binder	1 - 160 mm tall brick
Surface	2 - 160 mm tall bricks

1/ The compacted gyratory bricks for Hamburg wheel and I-FIT testing shall be 7.5 ± 0.5 percent air voids.

2/ If the Contractor does not possess the equipment to prepare the 160 mm tall brick(s), twice as many 115 mm tall compacted gyratory bricks will be acceptable.

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

“When a test strip is not required, each HMA mixture shall still be sampled on the first day of production: I-FIT and Hamburg wheel testing for High ESAL; I-FIT testing for Low ESAL. Within two working days after sampling the mixture, the Contractor shall deliver gyratory cylinders to the District laboratory for Department verification testing. The High ESAL mixture test results shall meet the requirements of Articles 1030.05(d)(3) and 1030.05(d)(4). The Low ESAL mixture test results shall meet the requirements of Article 1030.05(d)(4). The required number and size of prepared samples submitted for the Hamburg wheel and I-FIT testing shall be according to the “High ESAL - Required Samples for Verification Testing” table in Article 1030.05(d)(3) above.”

Add the following to the end of Article 1030.10 of the Standard Specifications to read:

“Mixture sampled during first day of production shall include approximately 60 lb (27 kg) of additional material for the Department to conduct Hamburg wheel testing and approximately 80 lb (36 kg) of additional material for the Department to conduct I-FIT testing. Within two working days after sampling, the Contractor shall deliver prepared samples to the District laboratory for verification testing. The required number and size of prepared samples submitted for the Hamburg wheel and I-FIT testing shall be according to the “High ESAL - Required Samples for Verification Testing” table in Article 1030.05(d)(3) above.”

HOT-MIX ASPHALT DRIVEWAY PAVEMENT

This work shall consist of furnishing, placing and compacting hot-mix asphalt driveway pavement at locations shown on the plans and as directed by the Engineer.

This work shall conform to the applicable Sections of Articles 355 and 406 of the Standard Specifications.

Private driveways shall be constructed to a nominal thickness of 8" which shall consist of a 2" thick surface course (HMA Surface Course, Mix "D", N50) and 6" thick hot mix asphalt binder course (HMA Base Course, 6"). Aggregate and bituminous material prime coats shall be applied according to Article 406 and as directed by the Engineer.

Commercial driveways shall be constructed to a nominal thickness of 10 inches which shall consist of a 2" thick surface course (HMA Surface Course, Mix "D", N50) and 8" thick hot mix asphalt binder course (HMA Base Course, 8"). Aggregate and bituminous material prime coats shall be applied according to Article 406 and as directed by the Engineer.

Method of Measurement: Hot-Mix Asphalt driveway pavement will be measured in place and the area computed in square yards. The pavement materials and aggregate and bituminous material prime coats will not be measured for payment separately but shall be considered included in payment for Hot-Mix Asphalt Driveway Pavement.

Basis of Payment: The work will be paid at the contract unit price per square yard for HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 8" or HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 10", which price shall be full payment for all materials, labor, and equipment necessary to construct the driveways.

CENTERLINE – RUMBLE STRIP

Description. This work shall consist of constructing rumble strips on the centerline of the roadway.

Equipment. The equipment shall be a self-propelled milling machine with a rotary-type cutting head(s). The cutting head(s) shall be suspended from the machine such that it can align itself with the slope of the roadway and any irregularities in the roadway surface. The teeth of the cutting head(s) shall be arranged to provide a smooth cut, with no more than 1/8 inch difference between peaks and valleys.

Prior to the commencement of the work, the Contractor shall demonstrate the ability of the equipment to achieve the desired results without damaging the roadway.

General. The rumble strip shall be cut to the dimensions shown on the plans. Guides shall be used to ensure consistent alignment, spacing, and depth.

Rumble strips shall not be placed within 12 inches of bridge joints or within 6 inches of transverse joints or raised pavement markers. Cuttings resulting from this operation shall be disposed of according to Article 202.03 and the shoulders shall be swept clean.

The rumble strip shall be centered directly over the centerline of the pavement. The finished rumble strip shall be straight, with the lateral deviation of 1 inch or less.

Basis of Payment. This work will be paid for at the contract unit price per foot for CENTER LINE - RUMBLE STRIP - 16", measured parallel to the edge of the roadway.

CURB OR COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT (D1)

Effective: November 1, 2020

Revised: September 1, 2022

Description. This work shall consist of the complete removal and replacement of curb or combination curb and gutter. Work shall be according to Sections 440 and 606 of the Standard Specifications, State Standard 606001, District Detail BD-24 and as directed by the Engineer except as modified herein.

Curb or combination curb and gutter removal and replacement shall match the type of the existing curb or combination curb and gutter. Types may be variable and are to meet existing dimensions and field conditions. Locations of removal and replacement shall be determined by the Resident Engineer at the time of construction.

Unsuitable material to be removed, as directed by the Engineer, shall be replaced with subbase granular material, type B or additional thickness of concrete. Suitable backfill material, when required, shall be replaced as directed by the Engineer.

Epoxy coated tie bars, #6 (20) - 24" (610) long at 24" (610) centers, shall be used except when adjacent to flexible pavement. Longitudinal bars, if encountered, are not to be replaced.

Hot-mix asphalt surface removal on the existing gutter flag, if encountered, shall be included in the removal of the curb and gutter.

Saw cuts shall be according to Article 440.03 of the Standard Specifications.

1/2" (13) preformed expansion joints shall be used at concrete sidewalks, driveways and medians.

Method of Measurement. Concrete curb removal and replacement, or combination concrete curb and gutter removal and replacement will be measured for payment in feet (meters) along the face of concrete curb. A minimum replacement length of 4 feet is required.

Basis of Payment. This item will be paid for at the contract unit price per foot (meter) for CURB REMOVAL AND REPLACEMENT GREATER THAN 10 FEET or COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT GREATER THAN 10 FEET for lengths greater than 10 feet.

This item will be paid at the contract unit price per foot (meter) for CURB REMOVAL AND REPLACEMENT LESS THAN OR EQUAL TO 10 FEET or COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT LESS THAN OR EQUAL TO 10 FEET for lengths less than or equal to 10 feet.

Where unsuitable material is encountered in the subgrade or subbase and its removal and replacement is required by the Engineer, such removal and replacement will be paid for according to Article 109.04.

Sidewalk removal, driveway pavement removal and median surface removal will be paid for according to Article 440.08 of the Standard Specifications.

Portland cement concrete sidewalk will be paid for according to Article 424.13 of the Standard Specifications.

Portland cement concrete driveway pavement will be paid for according to Article 423.11 of the Standard Specifications.

Hot-mix asphalt driveway will be paid for according to Article 355.11 and 406.14 of the Standard Specifications.

Concrete median surface will be paid for according to Article 606.15 of the Standard Specifications.

Topsoil will be paid for according to Article 211.08 of the Standard Specifications.

Sodding will be paid for according to Article 252.13 of the Standard Specifications. Fertilizer for the placement of sod is not required.

COFFERDAM (TYPE 1) (IN-STREAM/WETLAND WORK) (D1)

Effective: January 1, 2019

Revised: August 15, 2022

Description. This work shall be performed in accordance with Section 502.06 of the Standard Specifications for Road and Bridge Construction, except as herein modified. The work shall consist of the preparation of an in-stream/wetland work plan and the installation, maintenance, removal and disposal of the temporary cofferdam(s) to isolate the work area from water within regulated wetlands and Waters of the U.S. (WOUS) in accordance with the authorized U.S. Army Corps of Engineers (USACE) Section 404 Permit and the General Conditions of the current Nationwide Permit Program.

Materials. Materials shall be in accordance with the USACE Section 404 Permit and General Conditions of the current Nationwide Permit Program.

Construction Requirements. Construction shall be in accordance with Article 502.06(a) of the Standard Specifications for Road and Bridge Construction and in accordance with the authorized USACE Section 404 Permit. For Cofferdam - Type 1, it is anticipated the design will be based on the flow requirement as shown in the plans and per the General Conditions of the current Nationwide Permit Program.

The Contractor shall be responsible for diverting the water flow from the construction area using a method meeting the approval of the Engineer and in accordance with the authorized USACE Section 404 Permit and General Conditions of the current Nationwide Permit Program.

This project requires a USACE Section 404 Permit prior to the start of work. All conditions of the Section 404 Permit must be followed. As a condition of the Section 404 Permit, the Contractor will be required to submit an In-Stream/Wetland Work Plan to the Department for approval. The USACE defines and determines in-stream/wetland work within the WOUS.

Guidelines on acceptable In-Stream/Wetland work techniques can be found on the USACE website: <https://www.lrc.usace.army.mil/Missions/Regulatory/Illinois/IL-Nationwide-Permits/>

Method of Measurement. This work will be measured for payment in units of Each where Each is defined as a plan detailed stage of bridge, culvert or other construction for which a temporary in-stream cofferdam(s) is required. If staged construction is not detailed/specified on the plans, this work will be measured as a total of One Each.

Basis of Payment. This work will be paid for at the contract unit price per each for COFFERDAM (TYPE 1) (IN-STREAM/WETLAND WORK).

REMOVE AND REPLACE STONE RIPRAP

Description. This work shall consist of the removal, safe storage, and reinstalling of the existing stone riprap material. The installation shall be in accordance with Section 281 of the Standard Specifications and as herein specified. The existing stone riprap shall be removed and stored out of the work area at the start of the project, prior to the regrading phase. When appropriate, this material shall be returned and reinstalled as the top layer on the proposed regraded area. The Engineer will determine the limits of replacement.

Method of Measurement. This work will be measured for payment in cubic yards of REMOVE AND REPLACE STONE RIPRAP, which is reinstalled over the proposed regraded area. Filter Fabric will not be measured for payment and shall be incidental to this work.

Basis of Payment. This work will be paid for at the contract unit price per cubic yard for REMOVE AND REPLACE STONE RIPRAP.

STORM SEWER ADJACENT TO OR CROSSING WATER MAIN (D1)

Effective: February 1, 1996

Revised: January 1, 2007

This work consists of constructing storm sewer adjacent to or crossing a water main, at the locations shown on the plans. The material and installation requirements shall be according to the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and the applicable portions of Section 550 of the Standard Specifications; which may include concrete collars and encasing pipe with seals if required.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

Encasing of standard type storm sewer, according to the details for "Water and Sewer Separation Requirements (Vertical Separation)" in the "STANDARD DRAWINGS" Division of the "Standard Specifications for Water and Sewer Main Construction in Illinois", may be used for storm sewers crossing water mains.

Basis of Payment: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be STORM SEWER (WATER MAIN REQUIREMENTS), of the diameter specified.

CLEANING EXISTING DRAINAGE STRUCTURES (D1)

Effective: September 30, 1985

Revised: May 1, 2022

All existing storm sewers, pipe culverts, manholes, catch basins and inlets shall be considered as drainage structures insofar as the interpretation of this Special Provision is concerned. When specified for payment, the location of drainage structures to be cleaned will be determined in the field by the Engineer.

All existing drainage structures which are to be adjusted or reconstructed shall be cleaned according to Article 602.15 of the Standard Specifications. This work will be paid for according to accordance with Article 602.16 of the Standard Specifications.

All other existing drainage structures which are specified to be cleaned by the Engineer will be cleaned according to Article 602.15 of the Standard Specifications.

Basis of Payment: This work will be paid for at the contract unit price each for DRAINAGE STRUCTURES TO BE CLEANED, and at the contract unit price per foot (meter) for STORM SEWERS TO BE CLEANED, of the diameter specified.

ADJUSTMENTS AND RECONSTRUCTIONS (D1)

Effective: March 15, 2011

Revised: October 1, 2021

Revise the first paragraph of Article 602.04 to read:

“602.04 Concrete. Cast-in-place concrete for structures shall be constructed of Class SI concrete according to the applicable portions of Section 503. Cast-in-place concrete for pavement patching around adjustments and reconstructions shall be constructed of Class PP-2 concrete, unless otherwise noted in the plans, according to the applicable portions of Section 1020.”

Revise the third, fourth and fifth sentences of the second paragraph of Article 602.11(c) to read:

“Castings shall be set to the finished pavement elevation so that no subsequent adjustment will be necessary, and the space around the casting shall be filled with Class PP-2 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b.”

Revise Article 603.05 to read:

“603.05 Replacement of Existing Flexible Pavement. After the castings have been adjusted, the surrounding space shall be filled with Class PP-2 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b.”

Revise Article 603.06 to read:

“603.06 Replacement of Existing Rigid Pavement. After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-2 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface.”

Revise the first sentence of Article 603.07 to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.”

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (D1)

Effective: April 1, 2011

Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

- “(i) Temporary Hot-Mix Asphalt (HMA) Ramp (Note 1) 1030
- “(j) Temporary Rubber Ramps (Note 2)

Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)”

Revise Article 603.07 of the Standard Specifications to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting \pm 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

TRENCH DRAIN REMOVAL AND INSTALLATION

This work shall consist of removing and reinstalling an existing trench drain located at the commercial entrance in the southeast quadrant of IL 58 (FAP 559) and Barrington Road.

The Contractor shall disconnect the existing trench drain system and remove the trench drain from the existing driveway. This removal may take place prior to the removal of the driveway. Care shall be taken to not damage the trench drain system. The Contractor shall replace the existing trench drain system if damaged during removal.

Once the existing driveway has been removed, the Contractor shall reconnect the trench drain and reinstall the trench drain to the proposed finished grade.

This work will be paid for at the contract unit price per each for TRENCH DRAIN REMOVAL AND INSTALLATION, which price shall include all work for removing and reinstalling the existing trench drain.

CONCRETE MEDIAN SURFACE, 6"

Description: This work shall be done in accordance with Section 606 of the Standard Specifications, except where modified herein.

Basis of Payment: Delete the second paragraph of Article 606.15 and replace with the following:

Concrete median will be paid for at the contract unit price per square foot for CONCRETE MEDIAN SURFACE, 6 INCH.

CONCRETE STEPS

Description. This work shall consist of constructing reinforced concrete steps as shown in the plans and shall be in accordance with Section 503 of the Standard Specification.

Method of Measurement. This work will be measured for payment in cubic yards for CONCRETE STEPS.

Reinforcement bars will be measured for payment according to Article 508.10 of the Standard Specifications.

Protective coat will be measured for payment in place and the area computed in square yards.

Basis of Payment. This work will be paid for at the contract unit price per cubic yard for CONCRETE STEPS.

Reinforcement bars will be paid for according to Article 508.11 of the Standard Specifications.

Protective coat will be paid for at the contract unit price per square yard for PROTECTIVE COAT.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (PROJECT SPECIFIC)

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

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

Soil Disposal Analysis. When the waste material requires sampling for landfill disposal acceptance, the Contractor shall secure a written list of the specific analytical parameters and analytical methods required by the landfill. The Contractor shall collect and analyze the required number of samples for the parameters required by the landfill using the appropriate analytical procedures. A copy of the required parameters and analytical methods (from landfill email or on landfill letterhead) shall be provided as Attachment 4A of the BDE 2733 (Regulated Substances Final Construction Report). The price shall include all sampling materials and effort necessary for collection and management of the samples, including transportation of samples from the job site to the laboratory. The Contractor shall be responsible for determining the specific disposal facilities to be utilized; and collect and analyze any samples required for disposal facility acceptance using a NELAP certified analytical laboratory registered with the State of Illinois.

Site 3492V-1: Poplar Creek Forest Preserve, 2600 block of Golf Road, Hoffman Estates, Cook County

- Station 29+75 to Station 31+55 (CL IL 58), 0 to 50 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Lead and Manganese.
- Station 34+60 to Station 37+60 (CL IL 58), 0 to 50 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Contaminants of concern sampling parameters: Benzo(a)pyrene and Lead.
- Station 37+60 to Station 40+60 (CL IL 58), 0 to 50 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.
- Station 40+60 to Station 43+60 (CL IL 58), 0 to 50 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Iron, Lead, Manganese, and Nickel.
- Station 20+00 to Station 21+85 (CL Barrington Road), 0 to 130 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.
- Station 29+75 to Station 32+20 (CL IL 58), 0 to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 32+20 to Station 40+75 (CL IL 58), 0 to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)pyrene, Iron, Lead and Manganese.
- Station 40+75 to Station 46+25 (CL IL 58), 0 to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.
- Station 18+40 to Station 20+00 (CL Barrington Road), 0 to 130 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminants of concern sampling parameters: Manganese and Nickel.

Site 3492V-3: Hoffman Village, 2503-2579 Golf Road and 1165-1199 Barrington Road, Hoffman Estates, Cook County

- Station 52+80 to Station 53+10 (CL IL 58), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.
- Station 53+10 to Station 54+75 (CL IL 58), 0 to 80 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminant of concern sampling parameter: Manganese.
- Station 54+75 to Station 56+20 (CL IL 58), 0 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Manganese.

Site 3492V-4: Commercial Building, 1225-1249 Barrington Road, Hoffman Estates, Cook County

- Station 18+70 to Station 20+00 (CL Barrington Road), 0 to 70 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminant of concern sampling parameter: Manganese.
- Station 50+70 to Station 51+60 (CL IL 58), 0 to 90 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminant of concern sampling parameter: Manganese.
- Station 51+60 to Station 52+80 (CL IL 58), 0 to 90 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.

Site 3492V-5: Commercial Building, 2588-2590 Golf Road, Hoffman Estates, Cook County

- Station 20+00 to Station 21+75 (CL Barrington Road), 0 to 50 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminant of concern sampling parameter: Benzo(a)pyrene.
- Station 50+50 to Station 51+60 (CL IL 58), 0 to 100 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(3). Contaminant of concern sampling parameter: Benzo(a)pyrene.
- Station 51+60 to Station 52+55 (CL IL 58), 0 to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminant of concern sampling parameters: Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene and Manganese.

Site 3492V-10: McDonald's, 2580 Golf Road, Hoffman Estates, Cook County

- Station 52+55 to Station 52+95 (CL IL 58), 0 to 70 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminant of concern sampling parameter: Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene and Manganese.

Site 3492V-11: Walgreens, 2560 Golf Road, Hoffman Estates, Cook County

- Station 54+35 to Station 56+15 (CL IL 58), 0 to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.

Site 3492V-12: Commercial Building, 2500 Golf Road, Hoffman Estates, Cook County

- Station 56+15 to Station 56+50 (CL IL 58), 0 to 80 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.
- Station 58+95 to Station 63+50 (CL IL 58), 0 to 70 feet LT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.

Site 3492V-13: Chase Bank, 2555 Golf Road, Hoffman Estates, Cook County

- Station 56+20 to Station 56+50 (CL IL 58), 0 to 100 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(1). Contaminants of concern sampling parameters: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Manganese.

Site 3492V-14: Hoffman Estates Community Bank, 2497 Golf Road, Hoffman Estates, Cook County

- Station 58+35 to Station 62+20 (CL IL 58), 0 to 75 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Arsenic.

Site 3492V-15: Mavis Tire and Brakes, 2475 Golf Road, Hoffman Estates, Cook County

- Station 62+20 to Station 63+50 (CL IL 58), 0 to 75 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(2). Contaminant of concern sampling parameter: Manganese.

Work Zones

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

ENGINEER'S FIELD OFFICE TYPE A (D1)

Effective: January 1, 2022

Revise the first paragraph of Article 670.02 to read:

670.02 Engineer's Field Office Type A (D1). Type A (D1) field offices shall have a ceiling height of not less than 7 feet and a floor space of not less than 1000 square feet with a minimum of two separate offices. The office shall also have a separate storage room capable of being locked for the storage of the nuclear measuring devices. The office shall be provided with sufficient heat, natural and artificial light, and air conditioning. Doors and windows shall be equipped with locks approved by the Engineer.

Add the following to Article 670.07 Basis of Payment.

The building or buildings, fully equipped, will be paid for at the contract unit price per calendar month or fraction thereof for ENGINEER'S FIELD OFFICE, TYPE A (D1).

TRAFFIC CONTROL PLAN (D1)

Effective: September 30, 1985

Revised: January 1, 2007

Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", any special details and Highway Standards contained in the plans, and the Special Provisions contained herein.

Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.

STANDARDS: 701001, 701006, 701011, 701101, 701106, 701201, 701301, 701306, 701311, 701421, 701422, 701426, 701427, 701501, 701601, 701602, 701606, 701611, 701701, 701801, 701901

DETAILS:

TC-10 Traffic Control and Protection for Side Roads, Intersections, and Driveways
TC-11 Raised Reflective Pavement Markers (Snow-Plow Resistant)
TC-13 District One Typical Pavement Markings
TC-14 Traffic Control and Protection at Turn Bays (To Remain Open to Traffic)
TC-16 Short Term Pavement Markings Letters and Symbols
TC-21 Detour Signing for Closing a State Highway
TC-22 Arterial Road Information Sign
TC-26 Driveway Entrance Signing

SPECIAL PROVISIONS:

Maintenance of Roadways
Public Convenience and Safety (Dist-1)
Traffic Control and Protection (Arterials)(D1)
Keeping Arterial Roadways Open to Traffic (Lane Closures Only)
Temporary Information Signing
Temporary Traffic Signal Timing
Short Term and Temporary Pavement Markings (BDE)
Vehicle and Equipment Warning Lights (BDE)
Work Zone Traffic Control Devices (BDE)

TRAFFIC CONTROL AND PROTECTION (ARTERIALS) (D1)

Effective: February 1, 1996
Revised: March 1, 2011

Specific traffic control plan details and Special Provisions have been prepared for this contract. This work shall include all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans.

Method of Measurement: All traffic control (except "Traffic Control and Protection (Expressways)" and temporary pavement markings) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis.

Basis of Payment: All traffic control and protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Temporary pavement markings will be paid for separately unless shown on a Standard.

KEEPING ARTERIAL ROADWAYS OPEN TO TRAFFIC (LANE CLOSURES ONLY)

Effective: January 22, 2003

Revised: August 10, 2017

The Contractor shall provide the necessary traffic control devices to warn the public and to delineate the work zone as required in these Special Provisions, the Standard Specifications, the State Standards, and the District Details.

Arterial lane closures shall be in accordance with the Standard Specifications, Highway Standards, District Details, and the direction of the Engineer. The Contractor shall request and gain approval from the Engineer seventy-two (72) hours in advance of all long-term (24 hrs. or longer) lane closures.

Arterial lane closures not shown in the staging plans will not be permitted during **peak traffic volume hours**.

Peak traffic volume hours are defined as weekdays (Monday through Friday) from **6:00 AM to 8:30 AM and 4:30 PM to 6:00 PM**.

Private vehicles shall not be parked in the work zone. Contractor's equipment and/or vehicles shall not be parked on the shoulders or in the median during non-working hours. The parking of equipment and/or vehicles on State right-of-way will only be permitted at locations approved by the Engineer in accordance with Articles 701.08 and 701.11 of the Standard Specifications.

Should the Contractor fail to completely open and keep open all the traffic lanes to traffic in accordance with the limitations specified above, the Contractor shall be liable to the Department for the amount of:

One lane or ramp blocked = \$ 1,000

Two lanes blocked = \$ \$2,500

Not as a penalty but as liquidated and ascertained damages for each and every 15 minute interval or a portion thereof that a lane is blocked outside the allowable time limitations. Such damages may be deducted by the Department from any monies due the Contractor. These damages shall apply during the contract time and during any extensions of the contract time.

TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996

Revised: January 29, 2020

Description.

This work shall consist of furnishing, installing, maintaining, relocating for various states of construction and eventually removing temporary informational signs. Included in this item may be ground mount signs, skid mount signs, truss mount signs, bridge mount signs, and overlay sign panels which cover portions of existing signs.

Materials.

Materials shall be according to the following Articles of Section 1000 - Materials:

	<u>Item</u>	<u>Article/Section</u>
a.)	Sign Base (Note 1)	1090
b.)	Sign Face (Note 2)	1091
c.)	Sign Legends	1091
d.)	Sign Supports	1093
e.)	Overlay Panels (Note 3)	1090.02

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.

Note 2. The sign face material shall be in accordance with the Department's Fabrication of Highway Signs Policy.

Note 3. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIREMENTS

Installation.

The sign sizes and legend sizes shall be verified by the Contractor prior to fabrication.

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Article 701.14 and Article 720.04. The signs shall be 7 ft (2.1 m) above the near edge of the pavement and shall be a minimum of 2 ft (600 mm) beyond the edge of the paved shoulder. A minimum of two (2) posts shall be used.

The attachment of temporary signs to existing bridges, sign structures or sign panels shall be approved by the Engineer. Any damage to the existing signs and/or structures due to the Contractor's operations shall be repaired or signs replaced, as determined by the Engineer, at the Contractor's expense.

Method of Measurement.

This work shall be measured for payment in square feet (square meters) edge to edge (horizontally and vertically).

All hardware, posts or skids, supports, bases for ground mounted signs, connections, which are required for mounting these signs will be included as part of this pay item.

Basis Of Payment.

This work shall be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

TEMPORARY PAVEMENT (D1)

Effective: March 1, 2003

Revised: April 10, 2008

Description. This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.

The contractor shall use either Portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both Portland cement concrete and HMA are shown in the plans.

Articles 355.08 and 406.11 of the Standard Specifications shall not apply.

The removal of the Temporary Pavement, if required, shall conform to Section 440 of the Standard Specification.

Method of Measurement. Temporary pavement will be measured in place and the area computed in square yards (square meters).

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for TEMPORARY PAVEMENT and TEMPORARY PAVEMENT (INTERSTATE).

Removal of temporary pavement will be paid for at the contract unit price per square yard (square meter) for PAVEMENT REMOVAL.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Revise Article 402.10 of the Standard Specifications to read:

“402.10 For Temporary Access. The contractor shall construct and maintain aggregate surface course for temporary access to private entrances, commercial entrances, field entrances and roads according to Article 402.07 and as directed by the Engineer.

The aggregate surface course shall be constructed to the dimensions and grades specified below, except as modified by the plans or as directed by the Engineer.

- (a) Private Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). The maximum grade shall be eight percent, except as required to match the existing grade.
- (b) Commercial Entrance. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Field Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). The maximum grade shall be eight percent, except as required to match the existing grade.
- (d) Road. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface coarse for any operation that may disturb or remove the temporary access. The same type and gradation of material used to construct the temporary access shall be used to maintain it.

When use of the temporary access is discontinued, the aggregate shall be removed and utilized in the permanent construction or disposed of according to Article 202.03.”

Add the following to Article 402.12 of the Standard Specifications:

“Aggregate surface course for temporary access will be measured for payment as each for every private entrance, commercial entrance or road constructed for the purpose of temporary access. If a residential drive, commercial entrance, or road is to be constructed under multiple stages, the aggregate needed to construct the second or subsequent stages will not be measured for payment but shall be included in the cost per each of the type specified.”

Revise the second paragraph of Article 402.13 of the Standard Specifications to read:

“Aggregate surface course for temporary access will be paid for at the contract unit price per each for TEMPORARY ACCESS (PRIVATE ENTRANCE), TEMPORARY ACCESS (COMMERCIAL ENTRANCE), TEMPORARY ACCESS (FIELD ENTRANCE) or TEMPORARY ACCESS (ROAD).

Partial payment of the each amount bid for temporary access, of the type specified, will be paid according to the following schedule:

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.
- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.”

RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REPLACEMENT

Effective: August 1, 2023

Revised:

Description: This work shall be completed in accordance with Section 781 of the Standard Specifications for Road and Bridge Construction. This work shall consist of reinstallation of reflectors into the raised pavement marker castings upon completion of staging in which the markers were in conflict with temporary lane usage.

Basis of Payment: This work will be measured for payment at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REPLACEMENT. Payment shall be full compensation for materials, labor and equipment required to complete this work.

RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL

Effective: August 1, 2023

Revised:

Description: This work shall be completed in accordance with Section 783 of the Standard Specifications for Road and Bridge Construction. This work shall consist of removing the reflector unit from existing raised reflector pavement markers that will remain in place at the end of construction activities. Existing reflectors that conflict with revised traffic patterns shall be removed immediately to facilitate a change in lane assignment. If darkness or inclement weather prohibits the removal operations, such operation shall be resumed the next morning or when weather permits.

The base casting shall remain in place in areas where no pavement rehabilitation is required, therefore only the reflector shall be removed. Debris from the removal operations shall be removed from the pavement prior to opening the roadway to traffic.

Basis of Payment: This work will be measured for payment at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL. Payment shall be full compensation for materials, labor and equipment required to complete this work.

TEMPORARY SIDEWALK

Description. This item shall consist of construction, maintenance and removal of temporary sidewalk as required for pedestrian access during construction. This work shall be performed in accordance with the applicable Articles of Section 406 of the Standard Specifications for hot-mix asphalt and as described herein.

Construction Requirements. Temporary sidewalk shall be constructed of a 2 in. thick hot-mix asphalt surface (Hot-Mix Asphalt Surface Course, Mix D, IL-9.5, N50). The subgrade shall be compacted to the satisfaction of the Engineer prior to temporary sidewalk placement. The continuous clear width of temporary sidewalk shall be the greater of the existing sidewalk width or 4 ft. Removed sidewalk shall be performed in accordance with the applicable Articles of Section 440 of the Standard Specifications. Disposal of the temporary sidewalk will be performed in accordance with Article 202.03 of the Standard Specifications.

Method Of Payment. This work shall be measured for payment in units of square foot of temporary sidewalk.

Basis Of Payment. This work shall be paid for at the contract unit price per square foot for TEMPORARY SIDEWALK, which shall include all equipment, material and labor required for the construction, maintenance and removal and disposal of temporary sidewalks and preparation and compaction of the subgrade. Locations of temporary sidewalk placement shall be determined by the Engineer as field conditions warrant.

TEMPORARY SIDEWALK RAMP

Description: This work shall consist of installing and maintaining temporary ADA compliant ramps to maintain access to bus stops during construction at the locations shown on the plans or as directed by the Engineer.

Construction Requirements: This work shall be accordance to Standard 701801-06. Temporary ramps to maintain access shall be complaint with the ADA requirements and shall be used at locations to maintain a minimum of one ADA complaint pedestrian access path around construction activities at all times. The Contractor may elect to construct the temporary sidewalk ramp from wood or use a prefabricated product provided it meets the criteria below.

1. Traffic control devices used adjacent to pedestrian access paths for channelizing pedestrians shall be ADA complaint with a bottom edge at least 6 inches high from the walkway and a continuous rail or surface at 3 feet about the walkway.
2. Curb ramps shall be 5 feet minimum width with a firm, stable and non-slip surface.
3. Protective edging with a 2 in. minimum height shall be installed when the curb ramp or landing platform has a vertical drop of 6 in. or greater or has a side apron slope steeper than 1:3 (33%). Protective edging should be considered when curb ramps or landing platforms have a vertical drop of 3 inches or more.
4. Detectable edging with 6-inch minimum height and contrasting color shall be installed on all curb ramp landings where the walkway changes direction (turns).
5. Curb ramps and landings should have a 1:50 (2%) max cross-slope.
6. Clear space of 5 ft. x 5 ft. minimum shall be provided above and below the curb ramp.
7. The curb ramp walkway edge shall be marked with a contrasting color 2 to 4 inches wide marking. The marking is optional where color contrasting edging is used.
8. Water flow in the gutter system shall have minimal restriction.
9. Lateral joints or gaps between surfaces shall be less than 0.5-inch width.
10. Changes between surface heights should not exceed 0.5 inch. Lateral edges should be vertical up to 0.25-inch-high and beveled at 1:2 between 0.25 inch and 0.5 inch height.

Method of Measurement: Temporary sidewalk ramp will be measured for payment in place on an each basis at locations shown on the plans or as directed by the Engineer. Reinstallation, adjustment, or modification of a temporary sidewalk ramp at the same location will not be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price per each for "TEMPORARY SIDEWALK RAMP" and shall include removal.

TEMPORARY END SECTION

Description: This work shall consist of the construction, maintenance, and removal of temporary end sections at the locations shown on the plans in accordance with Section 542 of the Standard Specifications.

This work shall include the removal of the temporary end sections when its use is no longer required, in accordance with Article 551.03 of the Standard Specifications. Any material having salvage value will remain property of the Contractor.

Materials: The temporary end sections shall be in accordance with Article 542.07 except that the materials need not be new.

Method of Measurement: This work will be measured as EACH, complete and in place.

Basis of Payment: This work will be paid for at the contract unit price per each for TEMPORARY END SECTION, of the diameter specified on the plans.

Removal of temporary end sections will not be paid for separately but shall be included in the contract unit price for TEMPORARY END SECTION.

TEMPORARY STORM SEWER

Description: This work shall consist of the construction, maintenance, and removal of temporary storm sewers at the locations shown on the plans in accordance with Section 550 of the Standard Specifications.

This work shall include the removal of the temporary storm sewer when its use is no longer required, in accordance with Article 551.03 of the Standard Specifications. Any material having salvage value will remain property of the Contractor.

Materials: The temporary storm sewer shall be in accordance with Article 550.02 and 550.03 except that the materials need not be new. When a used storm sewer is furnished, the Engineer shall visually inspect the storm sewer for acceptance.

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

Basis of Payment: This work will be paid for at the contract unit price per foot for TEMPORARY STORM SEWER, of the class, type, and diameter specified which price shall include all labor, materials, and equipment necessary to complete the work.

Removal of temporary storm sewer will not be paid for separately but shall be included in the contract unit price for TEMPORARY STORM SEWER, of the class, type, and diameter specified.

REMOVE CONCRETE END SECTIONS

Description: This work shall consist of the removal and disposal of flared end sections at locations shown on the plans, in accordance with the applicable portions of Section 551 of the Standard Specification, and as directed by the Engineer.

Method of Measurement: Removal of existing concrete end sections will be measured for payment in units of each at the locations designated on the plans.

Basis of Payment: This work will be paid for at the contract unit price per each for REMOVE CONCRETE END SECTION.

MAST ARM SIGN PANELS

Effective: May 22, 2002

Revised: July 1, 2015

720.01TS

Add the following to Article 720.02 of the Standard Specifications:

Sign stiffening channel systems shall be aluminum and meet the requirements of ASTM 6261-T5. Sign mounting banding, buckles and buckle straps shall be manufactured from AISI 201 stainless steel.

SIGN SHOP DRAWING SUBMITTAL

Effective: January 22, 2013

Revised: July 1, 2015

720.02TS

Add the following paragraph to Article 720.03 of the Standard Specifications:

Shop drawings will be required, according to Article 105.04, for all Arterials/Expressways signs except standard highway signs covered in the MUTCD. Shop drawings shall be submitted to the Engineer for review and approval prior to fabrication. The shop drawings shall include dimensions, letter sizing, font type, colors and materials.

45 MIL HOT SPRAY THERMOPLASTIC PAVEMENT MARKING

Effective: February 28, 1994

Revised: December 18, 2012

This work shall consist of furnishing and applying spray thermoplastic pavement marking lines, sizes and colors as shown on the plans. The material shall be a mixture of resins and other materials providing an essentially nonvolatile thermoplastic compound especially developed for traffic markings. Spray thermoplastic pavement markings shall be applied only by contractors on the list of Approved Spray Thermoplastic Contractors maintained by the Engineer of Operations and in effect on the date of advertisement for bids.

Ingredient Materials:

- (a) Binder. The binder shall consist of a mixture of synthetic resins, at least one of which is solid at room temperature. The total binder content of the thermoplastic compound shall be well distributed throughout the compound. The binder shall be free from all foreign objects or ingredients that would cause bleeding, staining or discoloration. The binder shall be 25 percent minimum by weight of the thermoplastic compound. The binder shall be characterized by an "IR Spectra". Future shipments of binder will be checked by an "IR Spectra" to verify that the binder has not been changed.
- (b) Pigment. The pigment used for the white thermoplastic compound shall be a highgrade pure (minimum 93 percent) titanium dioxide (TiO₂). The white pigment content shall not be less than 10 percent by weight and shall be uniformly distributed throughout the thermoplastic compound.

The pigments used for the yellow thermoplastic compound shall be heat resistant, and color-fast yellows, golds and oranges, which shall produce a compound meeting the requirements of the current Federal Highway Color Tolerance Chart, PR Color No. 1. The medium chrome yellow pigment content shall be not less than 4 percent by weight and shall be uniformly distributed throughout the thermoplastic compound.

- (c) Filler: The filler to be incorporated with the resins as a binder shall be a white calcium carbonate, silica, or an approved substitute. Any filler, which is insoluble in 6N hydrochloric acid, shall be of such particle size as to pass a No. 100 (150 µm) sieve.
- (d) Glass Beads.

(1) Scope:

This specification covers glass beads to be used for reflectorizing pavement marking lines.

Type A – uncoated

Type B - moisture resistant, silicone coated

Type A shall be used as intermix beads with thermoplastic pavement marking materials. They shall be uniformly mixed throughout the material at the rate of not less than 25 percent by weight (retained on the No. 100 (150 µm) sieve) of thermoplastic compound. Type B shall be used as drop-on beads with thermoplastic pavement marking materials and shall be applied uniformly at a minimum rate of 6 pounds per 100 square feet (2.9 kilograms per 10 square meters).

(2) Properties:

The glass beads furnished under this specification shall consist essentially of transparent, water-white glass particles of a spherical shape. They shall be manufactured from a glass of a composition designed to be highly resistant to traffic wear and to the effects of weathering. The glass beads shall conform to the following requirements:

- (a) Sieve Analysis. The glass beads shall meet the following sieve requirements:

Total Percent (By Weight)	
<u>Sieve Size</u>	<u>Passing</u>
No. 20 (850 μ m)	100
No. 30 (600 μ m)	75 - 100
No. 50 (300 μ m)	15 - 40
No. 100 (150 μ m)	0 - 5
No. 200 (75 μ m)	0 - 1

- (b) Imperfections. The surface of the glass beads shall be free of pits and scratches. The glass beads shall be spherical in shape and shall contain not more than 20 percent by weight of irregular shapes when tested by the standard method using a vibratile inclined glass plate as adopted by the Department.
- (c) Index of Refraction. The index of refraction of the glass beads shall be not less than 1.50 when tested by the immersion method at 77 °F (25 °C).
- (d) Silica Content. The glass beads shall contain not less than 65 percent silica (SiO_2).
- (e) Chemical Stability. Glass beads which show a tendency toward decomposition, including surface etching, when exposed to paint or thermoplastic constituents will be rejected. The glass beads shall be tested by Federal Specification TT-B-1325B, Section 4.3.9 (water resistance) and evaluated for compliance with Section 3.2.9, with the following exceptions:

The size of the sample to be tested shall be 25 grams and the reflux time shall be 5 hours.

- (f) Flowing Properties. The glass beads shall flow uniformly through dispensing equipment in atmospheric humidity up to 94%.

Intermix beads shall pass the following test: One hundred grams of glass beads, spread evenly and thinly in a suitable container, shall be conditioned at 77 °F (25 °C) for 4 hours over a solution of sulfuric acid (Sp. Gr. 1.10) in a closed desiccator. After 4 hours, the glass beads shall flow readily through a clean glass analytical funnel, 60°, 75 mm diameter and 105 mm stem. Inside diameter of the stem shall be a nominal 1/4 inch (6.35 mm).

The drop-on beads shall have a silicone, moisture resistant coating and pass the following test: One hundred grams of beads are placed in a 600 ml beaker and an equivalent volume of distilled water shall be added to the beaker. The beaker will then stand for 5 minutes, at the end of which time the water shall be carefully poured off and the beads transferred to a clean dry beaker and allowed to stand for 5 minutes. The beads will then be poured slowly into a standard glass funnel (Corning 6120), 127 mm diameter, 102 mm stem length and 11 mm stem inside diameter.

The beads shall flow through the funnel stem without stoppage. Slight initial agitation to start the flow through the funnel at the beginning of the test is permissible.

- (g) Packaging. The Type B glass beads shall be delivered in approved moisture proof bags consisting of a least five-ply paper construction unless otherwise specified. Each bag shall contain 50 pounds (22.7 kg) net, and shall be legibly marked with the manufacturer, specifications and type, lot number, and the month and year the glass beads were packaged.

Thermoplastic Compound:

(a) Characteristic Requirements:

- (1) In the plastic state, the material shall not give off fumes that are toxic or otherwise injurious to persons or property. The manufacturer shall provide material safety data sheets for the product.
- (2) The temperature versus viscosity characteristic of the plastic material shall remain constant and the material shall not deteriorate in any manner during reheating processes.

- (3) There shall be no obvious change in color of the material as a result of repeated heating or from batch to batch. The maximum elapsed time after application after which normal traffic will leave no impression or imprint on the new stripe shall be 30 seconds when the air and road surface temperature is approximately 70 ± 3 °F (21 ± 2 °C). After application and proper drying, the material shall show no appreciable deformation or discoloration, shall remain free from tack, and shall not lift from the pavement under normal traffic conditions within a road temperature range of -20 to 150 °F (-28.9 to 65.6 °C). The stripe shall maintain its original dimensions and placement.

Cold ductility of the material shall be such as to permit normal dimensional distortion as a result of traffic impact within the temperature range specified.

- (4) The material shall provide a stripe that has a uniform thickness throughout its cross section and has the density and character to provide a sharp edge of the line.
- (5) The thermoplastic compound after heating for 4 hours \pm 5 min. at 375 ± 3 °F (190.6 ± 2 °C) and cooled at 77 °F (25 °C) shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45° circumferential / 0° geometry, illuminant C, and 2° observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

White: Daylight Reflectance, 75 percent minimum

*Yellow: Daylight Reflectance, 45 percent minimum

*Shall match Federal Highway Color Tolerance Chart, PR Color No. 1.

- (6) Specific Gravity - the specific gravity of the thermoplastic material shall not exceed 2.15.
- (7) Softening Point - After heating the thermoplastic material for 4 hours \pm 5 min. at 375 ± 3 °F (190.6 ± 2 °C) and testing in accordance with ASTM E28, the material shall have a minimum softening point of 180 °F (82.2 °C) as measured by the ring and ball method.
- (8) Tensile Bond Strength - After heating the thermoplastic material for 4 hours \pm 5 min. at 375 °F (190.6 °C), the tensile bond strength to unprimed, sandblasted portland cement concrete block, 0.0625 inch (1.587 mm) thick film drawn-down 375 °F (190.6 °C), tested at 75 ± 2 °F (23.9 ± 1 °C) shall exceed 180 psi (1.24 Mpa) when tested in accordance with ASTM D4796-88.
- (9) Impact Resistance - After heating the thermoplastic material for 4 hours \pm 5 min at 375 ± 3 °F (190.6 ± 2 °C) the impact resistance shall be a minimum of 50 inch pounds (0.576 kilogram meters) with no cracks or bond loss when 0.0625 inch (1.587 mm) thick film drawdown is made at 375 °F (190.6 °C) on an unprimed sandblasted Portland cement concrete block, male indentor 5/8 inch (15.875 mm), no female Die, tested at 75 ± 2 °F (23.9 ± 1 °C) when tested in accordance with ASTM D2794 minimum.

- (10) Yellowness Index - The white thermoplastic material shall not exceed a yellowness index of 12 when tested in accordance with ASTM D1925.

(b) Identification

Each package of material shall be stenciled with the manufacturer's name, the type of material and IDOT specification number, the month and year the material was packaged and lot number. Lot numbers must begin with the last two digits of the year manufactured and be sequential with Lot 1. The letters and numbers used in the stencils shall be a minimum of 1/2 inch (12.7 mm) in height.

(c) Packaging

The thermoplastic material shall be packaged in suitable containers that will not adhere to the product during shipment and storage. The container of thermoplastic material shall weigh approximately 50 lbs (22.7 kg). Each container shall designate the color, binder (alkyd or hydrocarbon), spray and user information. The label shall warn the user that the material shall be heated in the range of 350 – 400 °F (177 – 204 °C).

(d) Storage Life

The material shall meet the requirements of this specification for a period of one year. The thermoplastic must also melt uniformly with no evidence of skins or unmelted particles for this one-year period. The manufacturer shall replace any material that does not meet the above requirements.

Sampling and Testing:

- (a) Unless otherwise provided, all materials shall be sampled and tested in accordance with the latest published standard methods of the American Society for Testing and Materials, and revisions thereof, in effect on the date of invitation for bids, where such standard methods exist. In case there are no ASTM Standards which apply, applicable standard methods of the American Association of State Highway Transportation Officials, or the Federal Government, or of other recognized standardizing agencies shall be used.
- (b) The right is reserved to inspect the material either at the place of manufacture or at the destination or at both places. If inspected at the place of manufacture, the manufacturer shall furnish such facilities as may be required for collecting and forwarding samples, and shall also furnish facilities for testing the material during the process of manufacture, if required. Tests will be made by and at the expense of the Department. All material samples for acceptance tests shall be taken or witnessed by a representative of the Bureau of Materials and Physical Research. All material samples shall be submitted to the Engineer of Materials and Physical Research, 126 East Ash Street, Springfield, Illinois 62704-4766 at least 30 days in advance of the pavement marking operations. Random check samples may be taken at the job site at the discretion of the Engineer.

- (c) The Engineer will test and approve the basic ingredients.
- (d) The sample(s) shall be labeled with the lot number, date, quantity and any other pertinent information. Samples shall be submitted in the following manner:
 - (1) Ingredient Materials:
 - (a) Glass beads: At least three randomly selected bags or containers shall be obtained from each lot or shipment of glass beads. The content of each bag or container shall be passed through a large Riffle Sampler, thus splitting the material down until a representative 1-quart (1-liter) sample is obtained. The sample from each container shall be submitted for testing.
 - (b) Binder: One pint (0.5 liter).
 - (c) Pigments: One pint (0.5 liter).
 - (d) Filler: One pint (0.5 liter).

(2) Thermoplastic:

At least three randomly selected containers shall be obtained from each lot. A 10 pound (4.5 kg) composite sample of the three containers shall be submitted for testing and acceptance. The lot size shall be approximately 44,000 pounds (20,000 kg) unless the total order is less than this amount.

Manufacturer's Responsibility:

- (a) The manufacturer shall perform tests on a minimum of one sample per 10,000 pounds (4,500 kg) of thermoplastic produced. Minimum tests required shall be a softening point determination and color. Manufacturer's test results shall be submitted along with the thermoplastic sample to the Bureau of Materials and Physical Research.
- (b) The manufacturer shall retain the test sample for a minimum period of 18 months.
- (c) The manufacturer shall furnish the Bureau of Materials and Physical Research with copies of bills of lading for all material inspected. Bills of lading shall indicate the consignee and destination, date of shipment, lot numbers, quantity, type of material, name and location of source.

Material Acceptance:

Final acceptance of a particular lot of thermoplastic will be based on the following:

- (a) Compliance of ingredient materials with the specifications.
- (b) Compliance of thermoplastic material with the specifications.
- (c) Manufacturer's test results for each lot of thermoplastic have been received.
- (d) Identification requirements are satisfactory.

Notification: The Contractor shall notify the Engineer 72 hours prior to the placement of the thermoplastic markings in order that an inspector can be present during the operation. At the time of this notification, the Contractor shall indicate the manufacturer and lot numbers of thermoplastic and glass beads that he intends to use. The Engineer will ensure that the approved lot numbers appear on the material package. Failure to comply with this provision may be cause for rejection.

Installation Requirements:

- (a) Before applying thermoplastic, the crack sealant shall be fully cured and hardened and the Contractor shall remove any dirt, glaze, grease, or any other material that would reduce the adhesion of the thermoplastic to the pavement.
- (b) This thermoplastic material shall be readily renewable by placing an overlay of new material directly over old markings of the same material. Such new material shall bond itself to the old markings in such a manner that no splitting or separation takes place. The contractor shall remove all existing material that might cause premature failure of the new material.
- (c) The thermoplastic material shall be installed in a molten state by the spray method at a minimum temperature of 350 °F (177 °C) and a maximum temperature of 400 °F (204 °C). Scorching or discoloration of material shall be cause for rejection by the Engineer. The machinery shall be constructed so that all mixing and conveying parts, up to and including the spray gun maintain the material in the molten state.
- (d) Thermoplastic pavement marking materials shall not be applied by the spray method when air and pavement surface temperatures are below 50 °F (10 °C) or when the surface of the pavement contains any evidence of moisture.
- (e) Unless directed by the Engineer, lines shall not be laid directly over a longitudinal crack or joint. The edge of the center line or lane line shall be offset a minimum distance of 2 inches (50 mm) from a longitudinal crack or joint. Edge lines shall be approximately 2 inches (50 mm) from the edge of pavement. The finished center and lane lines shall be straight, with the lateral deviation of any 10 foot (3 meter) line not to exceed 1 inch (25 mm).

- (f) A primer sealer of the type recommended by the manufacturer of the thermoplastic material shall be applied on all Portland concrete pavement surfaces, and if recommended by the manufacturer, on other types of pavement surface, prior to the installation of the thermoplastic material. The primer shall be free of solvent and water prior to the thermoplastic application.
- (g) The thermoplastic material shall be applied at a thickness of not less than 0.045 inch (1.143 mm), but in no case shall it exceed a thickness of 0.050 inch (1.27 mm). Finished lines shall be within a 1/4 inch (6.35 mm) of the width specified in the plans.
- (h) The Contractor shall place the thermoplastic markings with adequate drop on glass in accordance with the above requirements, uniformly applied to assure nighttime reflectivity. It shall be the Contractor's responsibility to use compatible combination of thermoplastic material and beads to preclude the surface beads from sinking deeply into the thermoplastic.
- (i) The thickness of the markings will be measured above the pavement surface at such random points as the Engineer selects to determine conformance to these specifications. If the measurements show less than 0.045 inch (1.143 mm), the Engineer will "chip" the edges of the markings at random points and measure the thickness of the chips to determine if the overall thickness of the markings is at least 0.045 inch (1.143 mm). If the overall thickness or the thickness above the pavement surface is substantially in conformance with the thickness requirements, payment will be made at 100 percent of the contract unit prices involved. When the thickness at a given location is less than 0.045 inch (1.143 mm), additional measurements will be taken on each side of such location at such intervals as the Engineer may select to determine the extent of the deficient portion of the marking. The Contractor shall then apply additional thermoplastic material and beads to bring the thickness of the markings to at least 0.045 inch (1.143 mm).

Equipment Requirements:

- (a) The application equipment used for placing lane and edge line on freeways shall be permanently mounted on a truck of sufficient size and stability to insure smooth, straight application. The truck shall be equipped to carry a minimum of 4,000 pounds (1800 kilograms) of molten thermoplastic. The equipment shall have the capability of automatically placing intermittent and continuous lines. The equipment shall be so constructed as to provide the various widths of pavement marking lines specified. The mounting shall be such as to allow the spray equipment to accurately follow road irregularities and produce lines of uniform dimensions.

- (b) The equipment used to install hot applied thermoplastic material shall provide continuous uniform heating to temperatures exceeding 400 °F (204 °C), mixing and agitation of the material. Conveying parts of the equipment between the main material reservoir and the dispensing device shall prevent accumulation and clogging. All parts of the equipment, which comes in contact with the material, shall be constructed for easy accessibility and exposure for cleaning and maintenance. The equipment shall operate so that all mixing and conveying parts including the line dispensing device, maintains the material at the plastic temperature. The use of pans, aprons, or similar devices to prevent die overruns will not be permitted.
- (c) Glass beads applied to the surface of the completed marking shall be applied by an automatic bead dispenser attached to the marking machine so that the beads are dispensed closely behind the installed marking. The glass bead dispenser shall be equipped with an automatic cut-off control synchronized with the cut-off of the thermoplastic material.
- (d) A special kettle shall be provided for uniformly melting and heating the thermoplastic material. The kettle must be equipped with an automatic thermostat control device and material thermometer for positive temperature control and to prevent overheating or under-heating of the material. The heating kettle and application equipment shall meet the requirements of the National Fire Underwriters and the National Fire Protection Association.
- (e) The Contractor shall provide an accurate temperature measuring device which shall be capable of measuring the pavement temperature prior to installation of the thermoplastic and the temperature of the molten thermoplastic material immediately after it is applied.

Inspection: The 45 mil hot spray thermoplastic pavement markings will be inspected following installation, but no later than November 1, and inspected following a winter performance period that extends 180 days from November 1 in accordance with the provisions of Article 780.10 of the Standard Specification.

Method of Measurement: Lines will be measured for payment in feet. Double yellow lines will be measured as two separate lines.

Basis of Payment: This work will be paid for at the contract unit prices per foot of applied line width for HOT SPRAY THERMOPLASTIC PAVEMENT MARKING – LINE.

TRAFFIC SIGNAL GENERAL REQUIREMENTS

Effective: May 22, 2002

Revised: March 1, 2024

800.01TS

These Traffic Signal Special Provisions and the "District One Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction." The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations.

All material furnished shall be new unless otherwise noted herein. Traffic signal construction and maintenance work shall be performed by personnel holding current International Municipal Signal Association (IMSA)/Illinois Public Service Institute (IPSI) Traffic Signal Technician Level II certification. A copy of the certification shall be immediately available upon request of the Engineer. The work to be done under the Contract consists of furnishing, installing, and maintaining all traffic signal work and items as specified in the plans and as specified herein in a manner acceptable and approved by the Engineer.

Definitions of Terms.

Add the following to Section 101 of the Standard Specifications:

101.56 Manufacturer. Company that sells a particular type of product directly to the Contractor or the Vendor.

101.57 Vendor. Company that supplies, represents, and provides technical support for IDOT District One approved traffic signal controllers and other related equipment. The Vendor shall be located within IDOT District One and shall:

- (1) Be full service with on-site facilities to assemble, test and troubleshoot traffic signal controllers and cabinet assemblies.
- (2) Maintain an inventory of IDOT District One approved controllers and cabinets.
- (3) Be staffed with permanent sales and technical personnel able to provide traffic signal controller and cabinet expertise and support.
- (4) Have technical staff that hold current IMSA/IPSI Traffic Signal Technician Level III certification and shall attend traffic signal turn-ons as well as cabinet and/or controller modifications.

Submittals.

Revise Article 801.05 of the Standard Specifications to read:

“All material approval requests shall be submitted electronically following District guidelines unless directed otherwise by the Engineer. Submittal requirements shall include, but not limited to the following:

- (1) All material approval requests shall be made prior to or no later than the date of the preconstruction meeting. A list of major traffic signal items can be found in Article 801.05. Material or equipment which is similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.
- (2) Product data and shop drawings shall be assembled by pay item. Only the top sheet of each pay item submittal will be stamped by the Department with the review status, except shop drawings for mast arm pole assemblies and the like will be stamped with the review status on each sheet.
- (3) Original manufacturer published product data and shop drawing sheets with legible dimensions and details shall be submitted for review.
- (4) When hard copy submittals are necessary, four (4) complete copies of the manufacturer's descriptive literatures and technical data for the traffic signal materials shall be submitted. For hard copy or electronic submittals, the descriptive literature and technical data shall be adequate for determining whether the materials meet the requirements of the plans and specifications. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.
- (5) When hard copy submittals are necessary for structural elements, four (4) complete copies of the shop drawings for the mast arm assemblies and poles, and the combination mast arm assemblies and poles showing, in detail, the fabrication thereof and the certified mill analyses of the materials used in the fabrication, anchor rods, and reinforcing materials shall be submitted.
- (6) Partial or incomplete submittals will be returned without review.
- (7) Certain non-standard mast arm poles and special structural elements will require additional review from IDOT's Central Office. Examples include ornamental/decorative, non-standard length mast arm pole assemblies and monotube structures.
- (8) The Contract number or Permit number, project location/limits, and corresponding pay code number must be on each sheet of correspondence, material approval, and mast arm poles and assemblies drawings.

- (9) Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections and/or tests of material shall be complete with all test data, dates, and times.
- (10) After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Incomplete'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with Contract and specification requirements.
- (11) The Contractor shall secure approved materials in a timely manner to assure construction schedules are not delayed.
- (12) All submitted items reviewed and marked 'APPROVED AS NOTED', 'DISAPPROVED', or 'INCOMPLETE' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments, with a disposition of previous comments to verify Contract compliance at no additional cost to the Contract.
- (13) Exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.
- (14) The Contractor shall not order major equipment such as mast arm assemblies prior to Engineer approval of the Contractor marked proposed traffic signal equipment locations to assure proper placement of Contract required traffic signal displays, push buttons and other facilities. Field adjustments may require changes in proposed mast arm length and other coordination.
- (15) Revised cabinet wiring diagrams shall be submitted whenever any wiring modifications are made to the traffic signal cabinet."

Marking Proposed Locations.

Revise "Marking Proposed Locations for Highway Lighting System" of Article 801.09 to read "Marking Proposed Locations for Highway Lighting System and Traffic Signals."

Add the following to Article 801.09 of the Standard Specifications:

"It shall be the Contractor's responsibility to verify all dimensions and conditions existing in the field prior to ordering materials and beginning construction. This shall include locating the mast arm foundations and verifying the mast arms lengths."

Inspection of Electrical Systems.

Add the following to Article 801.10 of the Standard Specifications:

- (c) All cabinets, including temporary traffic signal cabinets, shall be assembled by an approved Vendor in District One. The Department reserves the right to request any controller and cabinet to be tested at the Vendor's facility prior to field installation at no extra cost to the Contract.

Maintenance and Responsibility of Traffic Signal and Flashing Beacon Installations.

Replace Article 801.11(b) of the Standard Specifications to read:

- (b) Traffic Signals and Flashing Beacons. The Contractor shall be responsible for maintaining the traffic signal/flashing beacon installation in proper operating condition.

(1) General.

- a. The Contractor must notify the Area Traffic Signal Maintenance and Operations Engineer of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. The Department will attempt to fulfill the Contractor's inspection date request(s); however, workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested inspection date(s) cannot be scheduled by the Department.
- b. Full maintenance responsibility shall start upon the successful completion of a maintenance transfer inspection, or as directed by the Engineer. If the Contractor begins any physical work on the Contract or any portion thereof prior to a traffic signal inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at the time of transfer at no cost to the owner of the traffic signal equipment. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection, otherwise the traffic signal installation will not be accepted.

- c. All traffic signals within the limits of the Contract or those which have the item "MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION," "TEMPORARY TRAFFIC SIGNAL INSTALLATION", "TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION", "TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION", and/or "MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION" shall become the full responsibility of the Contractor. Maintenance responsibility shall end upon issuance of final acceptance by the Engineer.
- d. The Contractor shall have electricians with IMSA/IPSI Traffic Signal Technician Level II certification on staff to provide signal maintenance. A copy of the certification shall be immediately available upon request by the Engineer.
- e. This item shall include maintenance of all traffic signal equipment and other connected and related equipment such as flashing beacons, emergency vehicle preemption (EVP) equipment, master controllers, network switches, uninterruptable power supply (UPS) and batteries, pan-tilt-zoom (PTZ) cameras, vehicle detection, handholes, lighted signs, telephone service installations, cellular modems, radios, communication cables, and other traffic signal equipment. All conduit and related equipment to adjacent intersections shall be maintained to the far back handhole, or as directed by the Engineer. If adjacent intersections are part of Contract work, then maintenance of all conduit and related equipment shall be included in this item.
- f. Regional transit, County, and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as network switches and transit signal priority (TSP, SCP, and BRT) servers, radios, and other devices, where maintenance shall be coordinated with the owner.
- g. Maintenance shall not include automatic traffic enforcement equipment such as red light enforcement cameras, detectors, or peripheral equipment. This equipment is operated and maintained by others and shall be deactivated while on Contractor maintenance.
- h. The energy charges for the operation of the traffic signal installation shall be paid for by the Contractor.

(2) Maintenance.

- a. The Contractor shall inspect all traffic signal equipment and appurtenances every two (2) weeks to ensure they are functioning properly. Signal heads shall be properly adjusted, including plumb, and tightly mounted. All controller cabinets, signal posts, and controller pedestals shall be tight on their foundations and in alignment. Deficient equipment shall be repaired or replaced as necessary. The Contractor shall check signal system communications and phone lines to assure proper operation. This item includes, as routine maintenance, all portions of EVP equipment. The Contractor shall always maintain enough materials and equipment in stock to provide effective temporary and permanent repairs. The Contractor shall supply a detailed maintenance log monthly that includes dates, locations, names of electricians performing the required checks and inspections, and any other information requested by the Engineer. The Contractor shall attend any additional inspections as requested by the Engineer. The Contractor shall check the controllers, relays, and detectors after receiving complaints or calls to ascertain that they are functioning properly and make all necessary repairs and replacement.
- b. The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation which exceeds fifteen (15) minutes must have prior approval from the Engineer. Approval to shut down the traffic signal installation will only be granted during the period extending from 9:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.
- c. The Contractor shall provide immediate corrective action when any part(s) of the signal fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation in flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall install cones on all lane lines at the stop bar on each approach, R1-1 (36 in. minimum) "STOP" signs at the stop bar on each approach on the right side and on raised medians (where applicable), and black on fluorescent orange "SIGNALS OUT AHEAD" warning signs followed by fluorescent orange W3-1 symbolic stop ahead warning signs on all approaches to the intersection.

- d. Temporary replacement of a damaged or knocked down mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals is not permitted.
- e. The Contractor shall provide the Engineer with two (2) 24-hour telephone numbers for the maintenance of the traffic signal installation and for emergency calls by the Engineer.
- f. Traffic signal equipment which is lost, damaged, or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of the Standard Specifications and these special provisions.
- g. The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals and other equipment noted herein. The Contractor shall respond to all emergency calls from the Department or others within one (1) hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new equipment meeting current District One traffic signal specifications. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional cost to the Contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition, or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the Department's Electrical Maintenance Contractor perform the maintenance work. The Contractor shall be responsible for all of the Department's Electrical Maintenance Contractor's costs and liquidated damages of \$1,000 per day per occurrence. The Department's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to inspect the traffic signal installation that has been transferred to the Contractor for maintenance. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection, otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed. The Department may inspect any signaling device on the Department's highway system at any time without notification. The Contractor shall not install padlocks on traffic signal cabinets or otherwise restrict the Department's access to the cabinet or controller.

- h. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.
 - i. The Contractor shall be responsible to clear snow, ice, dirt, debris, vegetation, temporary fence, or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.
 - j. The Contractor shall maintain the traffic signal in normal operation during any loss of utility or battery backup power. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power shall not be paid for separately but shall be included in the Contract.
- (3) Basis of Payment. This work will be paid for at the Contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION. Each location will be paid for separately. Maintenance of a flashing beacon shall be paid for at the Contract unit price for MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION. Each flashing beacon will be paid for separately.

Damage to Traffic Signal System.

Add the following to Article 801.12(b) of the Standard Specifications:

“Any traffic signal control equipment that is damaged and non-repairable or not operating properly from any cause shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection. Repair or replace any equipment damaged within the time shown in the table below:

ITEM	RESPONSE TIME	SERVICE RESTORATION	PERMANENT REPAIR (calendar days)
Cabinet	1 hour	24 hours	21 days
Controllers and Peripheral Equipment	1 hour	4 hours	21 days
System Detector Loop	1 hour	N/A	7 days
All Other Detectors	1 hour	N/A	21 days
Signal Head and Lenses	1 hour	4 hours	7 days
Aviation Red Beacon	1 hour	4 hours	7 days
Mast Arm Assembly and Pole	1 hour	4 hours	7 days
Traffic Signal Post	1 hour	4 hours	7 days
Cable and Conduit	1 hour	4 hours	7 days
Interconnect and Telemetry	1 hour	4 hours	7 days
Graffiti Removal	N/A	N/A	7 days
Misalignment of Signal Heads	1 hour	4 hours	4 hours
Closed Loop Monitoring System	1 hour	24 hours	14 days
Post and Poles Plumb Vertically	N/A	N/A	21 days
Controller, Post & Pole Foundations	N/A	N/A	21 days
Complaints, Calls, Controller or System Alarms, Timing, Phasing, Programming	1 hour	4 hours	N/A
Patrol Truck Deficiencies	N/A	24 hours	24 hours
Signal Heads Visibility	1 day	2 days	14 days

Temporary replacement of a damaged or knocked down mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals will not be permitted.

Replacement of any equipment for any reason shall be reported to the Area Traffic Signal Maintenance and Operations Engineer in writing within 24 hours. Permanent and temporary replacement of the controller and/or cabinet shall require inspection and testing by the Vendor.

Automatic Traffic Enforcement equipment, such as red light enforcement cameras, detectors, and peripheral equipment, that is damaged or not operating properly from any cause, shall be the responsibility of the municipality or the automatic traffic enforcement company per Permit agreement.”

Traffic Signal Inspection (TURN-ON).

Revise Article 801.15(b) of the Standard Specifications to read:

“Turn-on. It is the intent to have all electric work completed and equipment field tested by the Contractor and/or Vendor prior to the Department’s “turn-on” field inspection. If in the event the Engineer determines work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled, and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected.

When the Contractor requests a turn-on and inspection of the completed traffic signal installation(s), the request must be made to the Area Traffic Signal Maintenance and Operations Engineer a minimum of seven (7) working days prior to the time of the requested inspection. The Department will attempt to fulfill the Contractor’s turn-on and inspection date request(s); however, workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested turn-on and inspection date(s) cannot be scheduled by the Department. The Department will not grant a field inspection until written or electronic notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Contractor must invite local fire department personnel to the turn-on when emergency vehicle preemption (EVP) is included in the project. When the Contract includes the item RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, OPTIMIZE TRAFFIC SIGNAL SYSTEM, and/or TEMPORARY TRAFFIC SIGNAL TIMING, the Contractor must notify the SCAT Consultant of the turn-on/detour implementation schedule, as well as stage changes and phase changes during construction.

The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation. The Contractor shall be responsible to provide a police officer to assist with traffic control at the time of testing.

The Contractor shall provide a representative from the Vendor who is knowledgeable of the cabinet design and controller functions to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons.

Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The signals shall continue to be maintained by the Contractor until final acceptance.

The Department requires the following Final Project Documentation from the Contractor at traffic signal turn-ons in electronic format in addition to hard copies where noted. An electronic media device shall be submitted with separate folders corresponding to each numbered title below. The electronic media device shall be labeled with date, project location, company, and Contract or Permit number. Electronic record drawings and material approvals shall be submitted prior to traffic signal turn-on for review by the Department as described in the Record Drawings section herein.

Final Project Documentation:

- (1) Record Drawings. Electronically produced signal plans of record with field revisions marked in red. Two (2) hard copies of 11 in. x 17 in. record drawings shall also be provided.
- (2) Field Testing. Written notification from the Contractor and the Vendor of satisfactory field testing with corresponding material performance measurements, such as for detector loops and fiber optic systems (see Article 801.13).
- (3) Material Approvals. Material approval documentation.
- (4) Manuals. Operation and service manuals of the signal controller and associated control equipment.
- (5) Cabinet Wiring Diagram and Cable Logs. Five (5) hard copies of 11 in. x 17 in. cabinet wiring diagrams shall be provided along with electronic PDF and DGN files of the cabinet wiring diagram. Five (5) hard copies of the cable logs and electronic Excel files shall be provided with cable #, number of conductors and spares, connected device/signal head and intersection location.
- (6) Warranties and Guarantees. All manufacturer and Contractor warranties and guarantees required by Article 801.14.
- (7) GPS Coordinates. GPS coordinates of traffic signal equipment as described in the Record Drawings section herein.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal "turn-on", completeness of the required documentation, and successful operation during a minimum 72 hour "burn-in" period following activation of traffic signal equipment. If approved, traffic signal acceptance shall be verbal at the final inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.

All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.

All punch list work shall be completed within two (2) weeks after the turn-on. The Contractor shall notify the Area Traffic Signal Maintenance and Operations Engineer to schedule an inspection of all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of \$500 per month per incident.

All cost of work and materials required to comply with the requirements herein shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the requirements herein shall be subject to removal and disposal at the Contractor's expense."

Record Drawings.

The requirements listed for Electrical Installation shall apply for Traffic Signal Installations in Article 801.16. Revise the second and third paragraphs of Article 801.16 of the Standard Specifications to read:

"When the work is complete, and seven (7) days before the request for a final inspection, electronic Contract drawings, stamped "RECORD DRAWINGS", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or electrician. The record drawings shall be submitted in PDF format. If the Contract consists of multiple intersections, each intersection shall be saved as an individual PDF file with TS# and location name in its file name.

In addition to the record drawings, copies of the final material approvals which have been Approved or Approved as Noted shall be submitted in PDF format. The PDF files shall clearly indicate the pay item either by filename or PDF Table of Contents referencing the respective pay item number for multi-item PDF files. Specific part or model numbers of items which have been selected shall be clearly visible.

The Contractor shall provide two (2) 11 in. x 17 in. hard copies of electronically produced final record drawings to be kept inside each traffic signal cabinet within project limits."

Add the following to Article 801.16 of the Standard Specifications:

"In addition to the specified record drawings, the Contractor shall record GPS coordinates of the following traffic signal components being installed, modified or being affected in other ways by the Contract:

- All Mast Arm Poles and Posts
- Traffic Signal Wood Poles
- Railroad Bungalow
- UPS
- Handholes
- Controller Cabinets
- Communication Cabinets
- Electric Service Disconnect locations
- CCTV/PTZ Camera installations

Datum to be used shall be North American 1983.

Data shall be provided in electronic format and shall be in .csv format. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

- File shall be named: TSXXX_YY-MM-DD.csv (i.e. TS22157_24-01-01.csv)
- Each intersection shall have its own file
- Row 1 should have the location name (i.e. IL 31 @ Klausen)
- Row 2 is blank
- Row 3 is the headers for the columns
- Row 4 starts the data
- Column A (Date) – should be in the following format: MM/DD/YYYY
- Column B (Item) – as shown in the table below
- Column C (Description) – as shown in the table below
- Column D and E (GPS Data) – should be in decimal form

Examples:

Date	Item	Description	Latitude	Longitude
01/01/2024	MP (Mast Arm Pole)	NEQ, NB, Dual, Combination Pole	41.580493	-87.793378
01/01/2024	HH (Handhole)	Heavy Duty, Fiber, Intersection, Double	41.558532	-87.792571
01/01/2024	ES (Electrical Service)	Ground mount, Pole mount	41.765532	-87.543571
01/01/2024	CC (Controller Cabinet)		41.602248	-87.794053
01/01/2024	PTZ (PTZ)	NEQ extension pole	41.593434	-87.769876
01/01/2024	POST (Post)		41.651848	-87.762053
01/01/2024	MCC (Master Controller Cabinet)		41.584593	-87.793378
01/01/2024	COMC (Communication Cabinet)		41.584600	-87.793432
01/01/2024	BBS (Battery Backup System)		41.558532	-87.792571

Data collection can be made as construction progresses or can be collected after all items are installed. If the data is unacceptable, the Contractor shall make corrections to the data collection equipment and/or process and resubmit the data for review and approval as specified.

Data shall have a minimum 1 ft accuracy after post processing.”

Restoration of Work Area.

Add the following article to Section 801 of the Standard Specifications:

“801.17 Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, underground raceways, detector loop installation or replacement, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer.

Exposed holes created from removal or relocation of traffic signal equipment shall be sealed using a zinc-plated fender washer with toggle bolt.

Restoration of the work area shall be included in the Contract without any extra compensation allowed to the Contractor.

Removal, Disposal, and Salvage of Existing Traffic Signal Equipment.

The removal, disposal, and/or salvage of existing traffic signal equipment shall become the property of the Contractor and disposed of by the Contractor outside the State's right-of-way, unless otherwise noted. No additional compensation shall be provided to the Contractor for removal, disposal or salvage expense for the work in the Contract.”

Bagging Signal Heads.

Light tan colored traffic and pedestrian signal reusable covers shall be used to cover dark/unenergized signal sections, visors, and retroreflective backplates. Covers shall be made of outdoor fabric with urethane coating for repelling water, have elastic fully sewn around the cover ends for a tight fit over the visor, and have a minimum of two (2) straps with buckles to secure the cover to the backplate. A center mesh strip allows viewing without removal for signal status testing purposes. Covers shall include a message indicating the signal is not in service. Pedestrian pushbuttons that are not in service shall be covered with a durable material such as described above or burlap that is secured in a weather-resistant manner. The entire housing, including the pedestrian sign, shall also be covered on the front side.

Turn-on of New Traffic Signal Installations.

The following only applies to new traffic signals at previously unsignalized locations.

The signal responsibility shall begin at the start of signal construction and shall end upon issuance of final acceptance by the Engineer. New traffic signal heads and indications may not be installed more than two (2) weeks (14 calendar days) prior to the scheduled turn-on of the traffic signal to avoid motorist confusion caused by the presence of new signal heads, even if properly covered. Unenergized signal indications shall be bagged until one (1) hour prior to the scheduled turn-on per the Bagging Signal Heads section above.

New stop bars and crosswalks on approaches that did not previously have stop control shall NOT be installed until the day of the traffic signal turn-on.

A Portable Changeable Message Sign (PCMS) must be placed two (2) weeks prior to the scheduled new traffic signal turn-on for all approaches to the intersection with the following messages:



where “MMM” and “##” are the 3-character month abbreviation and day of the scheduled turn-on, respectively.

On the day of the turn-on, change messages to read:



The PCMS must remain in place for two (2) weeks following the day of the turn-on.

Conflicting Stop signs shall be removed immediately at the time of the traffic signal turn-on.

Locating Underground Facilities.

Revise Section 803 to the Standard Specifications to read:

“IDOT traffic signal facilities are not part of any of the one-call locating service such as J.U.L.I.E or Digger. If the Contract requires the maintenance services of an Electrical Contractor, the Contractor shall be responsible at their own expense for locating all existing IDOT electrical facilities, including but not limited to interconnect conduit and handholes, prior to performing any work. A maintenance transfer is required prior to any locating work. If this Contract does not require the maintenance services of an Electrical Contractor, the Contractor may request one free locate for existing IDOT electrical facilities from the District One Electrical Maintenance Contractor prior to the start of any work. Additional requests will be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities, locally owned equipment, and leased enforcement camera system facilities, the local Counties or Municipalities may need to be contacted: in the City of Chicago contact Digger at (312) 744-7000, and for all other locations contact J.U.L.I.E. at 1-800-892-0123 or 811.

The Contractor shall take whatever precautions to protect the electric cable or electric conductors in conduit from damage during location and construction operations. If the wiring is damaged, the Contractor shall replace the entire length of cable or conductors in conduit, in a manner satisfactory to the Engineer. Splicing below grade will not be permitted.

In the event the repairs are not made by the Contractor, the Contractor shall reimburse the Department for such repairs within sixty (60) days of receiving written notification of said damage. Otherwise, the cost of such repairs will be deducted from monies due or which will become due the Contractor under the terms of the Contract."

Grounding of Traffic Signal Systems

Revise Section 806 of the Standard Specifications to read:

"All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. This work shall be in accordance with IDOT's District One Traffic Signal Design Details.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations where measured resistance exceeds 25 ohms. Ground rods are included in the applicable concrete foundation or service installation pay item and will not be paid for separately.

Testing shall be according to Article 801.13 (a) (4) and (5).

- (a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- (b) The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications:
 - (1) Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.

- (2) Equipment grounding conductors shall be bonded, using a UL Listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers, conduits, and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A UL listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points. Conduit grounding bushings shall be installed at all conduit terminations, including spare or empty conduits and conduit protruding from handhole walls.
- (3) All metallic and non-metallic raceways, including spare or empty raceways, shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 V and/or fiber optic cable will not be required to include an equipment grounding conductor.
- (4) Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.
- (c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, UL listed pressure connectors, and UL listed clamps."

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM

Effective: May 22, 2002

Revised: November 1, 2023

800.03TS

Description.

This work shall consist of re-optimizing a traffic signal system according to the following Levels of work.

LEVEL I applies when improvements are made to an existing signalized intersection within an existing traffic signal system. The purpose of this work is to integrate the improvements to the subject intersection into the signal system while minimizing the impacts to the existing system operation. This type of work would be commonly associated with the addition of signal phases, pedestrian phases, or improvements that do not affect the capacity at an intersection.

LEVEL II applies when improvements are made to an existing signalized intersection within an existing traffic signal system and detailed analysis of the intersection operation is desired by the engineer, or when a new signalized or existing signalized intersection is being added to an existing system, but optimization of the entire system is not required. The purpose of this work is to optimize the subject intersection, while integrating it into the existing signal system with limited impact to the system operations. This item also includes an evaluation of the overall system operation, including the Traffic Responsive Program (TRP).

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

After the signal improvements are completed, the signal shall be re-optimized as specified by an approved Consultant who has previous experience in optimizing traffic signal systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4734 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, timing patterns, and SCAT Report may be obtained from the Department, if available and as appropriate. The Consultant shall confer with the Area Traffic Signal Maintenance and Operations Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) LEVEL I Re-Optimization

1. The following tasks are associated with LEVEL I Re-Optimization.
 - a. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system.
 - b. Proposed signal timing plan for the modified intersection(s) shall be forwarded to IDOT for review prior to implementation.
 - c. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations. The consultant shall respond to IDOT comments and public complaints for a minimum period of six (6) months from date of timing plan implementation.
2. The following deliverable shall be provided for LEVEL I Re-Optimization.
 - a. Consultant shall furnish to IDOT a cover letter describing the extent of the re-optimization work performed.

(b) LEVEL II Re-Optimization

1. In addition to the requirements described in the LEVEL I Re-Optimization above, the following tasks are associated with LEVEL II Re-Optimization.
 - a. Traffic counts shall be taken at the subject intersection(s) after the traffic signals are approved for operation by the Area Traffic Signal Maintenance and Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday and on a Saturday and/or Sunday, as directed by the Engineer, to account for special traffic generators such as shopping centers, educational institutes and special event facilities. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.
 - b. The intersections shall be re-addressed and all system detectors reassigned as necessary according to the current standard practice of District One. System detector quantities and locations shall be assessed for optimal performance. The Department shall be notified of any proposed changes.
 - c. TRP operation shall be evaluated to verify proper pattern selection and lack of oscillation and a report of the operation shall be provided to IDOT.
2. The following deliverables shall be provided for LEVEL II Re-Optimization.
 - a. Consultant shall provide to IDOT one (1) USB flash drive for the optimized system containing the following:
 - (1) Electronic copy of the technical memorandum in PDF format
 - (2) Revised Synchro (or other appropriate, approved optimization software) files including the new signal and the rest of the signals in the system
 - (3) Traffic counts conducted at the subject intersection(s)

The flash drive shall be labeled with the IDOT system number and master location (if applicable), as well as the submittal date and the consultant logo.

- b. The technical memorandum shall include the following elements:
 - (1) Brief description of the project
 - (2) Analysis output from Synchro (or other appropriate, approved optimization software file)
 - (3) Traffic counts conducted at the subject intersection(s)

Basis of Payment.

This work shall be paid for at the contract unit price each for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL I or RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL II, which price shall be payment in full for performing all work described herein per intersection. Following completion of the timings and submittal of the specified deliverables, 100 percent of the bid price will be paid. Each intersection will be paid for separately.

SERVICE INSTALLATION (TRAFFIC SIGNALS)

Effective: May 22, 2002

Revised: March 1, 2024

805.01TS

Revise Section 805 of the Standard Specifications to read:

Description.

This work shall consist of all materials and labor required to install, modify, or extend the electric service installation. All installations shall meet the requirements of the “District One Standard Traffic Signal Design Details”.

General.

The electric service installation shall be the electric service disconnecting means and it shall be identified as suitable for use as service equipment.

The electric utility contact information is noted on the plans and represents the current information at the time of Contract preparation. The Contractor must request in writing for service and/or service modification within ten (10) days of Contract award and must follow-up with the electric utility to assure all necessary documents and payment are received by the utility. The Contractor shall forward copies of all correspondence between the Contractor and utility company to the Engineer and Area Traffic Signal Maintenance and Operations Engineer. The service agreement and sketch shall be submitted for signature to the IDOT’s Traffic Operations Programs Engineer.

Materials.

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

(b) Enclosures.

- (1) Pole Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080 in. (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded and ground smooth. Stainless steel screws and clamps shall secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14 in. (350 mm) high, 9 in. (225 mm) wide and 8 in. (200 mm) in depth is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the Vendor.
 - (2) Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 3R unfinished single door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125 in. (3.175 mm) thick, the top 0.250 in. (6.350 mm) thick and the bottom 0.500-inch (12.70 mm) thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full length tamperproof stainless steel .075 in. (1.91 mm) thick hinge bolted to the cabinet with stainless steel carriage bolts and nylock nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40 in. (1000 mm) high, 16 in. (400 mm) wide and 15 in. (375 mm) in depth is required. The cabinet shall be mounted upon a Type A concrete foundation as indicated on the plans. The foundation is paid for separately.
 - (3) All enclosures shall include a green external power indicator LED light with circuitry as shown in the Electrical Service-Panel Diagram detail sheet. For pole mounted service enclosures, the power indicator light shall be mounted as shown in the detail. For ground mounted enclosures, the power indicator light shall be mounted on the side of the enclosure most visible from the major roadway.
- (c) Electric Utility Meter Housing and Riser. The electric meter housing and meter socket shall be supplied and installed by the Contractor. The Contractor is to coordinate the work to be performed and the materials required with the utility company to make the final connection at the power source. Electric utility required risers, weather/service head, and any other materials necessary for connection shall also be included in the pay item. Materials shall be in accordance with the electric utility's requirements. For ground-mounted service, the electric utility meter housing shall be mounted to the enclosure. The meter shall be supplied by the utility company.

- (d) Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120 V load circuit by the means MOV and thermal fusing technology. The response time shall be < 5 ns and operate within a range of -40°C to +85°C. The surge protector shall be UL 1449 Listed.
- (e) Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 V circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 A, 120 V and the auxiliary circuit breakers shall be rated 10 A, 120 V.
- (f) Fuses and Fuseholders. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 VAC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage.
- (g) Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.
- (h) Utility Services Connection. The Contractor shall notify the utility company marketing representative a minimum of thirty (30) working days prior to the anticipated date of hook-up. This 30-day advance notification will begin only after the utility company marketing representative has received service charge payments from the Contractor. Prior to contacting the utility company marketing representative for service connection, the service installation controller cabinet and cable must be installed for inspection by the utility company.
- (i) Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10 ft (3.0m) in length, and 3/4 in. (20mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the Contract.

Installation.

- (a) General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the Engineer prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
- (b) Pole Mounted. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.

- (c) Ground Mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

Basis of Payment.

The service installation shall be paid for at the Contract unit price each for SERVICE INSTALLATION of the type specified which shall be payment in full for furnishing and installing the service installation complete. The CONCRETE FOUNDATION, TYPE A, which includes the ground rod, shall be paid for separately. SERVICE INSTALLATION, POLE MOUNTED shall include the 3/4 in. (20mm) grounding conduit, ground rod, and pole mount assembly. Any charges by the utility companies shall be approved by the Engineer and paid for as an addition to the Contract according to Article 109.05 of the Standard Specifications.

COILABLE NON-METALLIC CONDUIT

Effective: May 22, 2002

Revised: July 1, 2015

810.01TS

Description.

This work shall consist of furnishing and installing empty coilable non-metallic conduit (CNC).

General.

The CNC installation shall be in accordance with Sections 810 and 811 of the Standard Specifications except for the following:

Add the following to Article 810.03 of the Standard Specifications:

CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways to the handholes.

Add the following to Article 811.03 of the Standard Specifications:

On temporary traffic signal installations with detector loops, CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways from the saw-cut to 10 feet (3m) up the wood pole, unless otherwise shown on the plans

Basis of Payment.

All installations of CNC for loop detection shall be included in the contract and not paid for separately.

UNDERGROUND RACEWAYS

Effective: May 22, 2002

Revised: March 1, 2024

810.02TS

Revise Article 810.04 of the Standard Specifications to read:

“Installation. All underground conduits shall have a minimum depth of 30 in. (700 mm) below the finished grade and shall be installed to avoid existing and proposed utilities within the project limits.”

Add the following to Article 810.04 of the Standard Specifications:

“All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans.”

All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum of 1 ft (300 mm) or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped.

The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap.

The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 1/8 in. (3 mm) thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring.”

HANDHOLES

Effective: January 01, 2002

Revised: November 1, 2023

814.01TS

Description.

Add the following to Section 814 of the Standard Specifications:

All conduits shall enter the handhole at a depth of 30 in. (762 mm) except for the conduits for detector loops when the handhole is less than 5 ft (1.52 m) from the detector loop. All conduit ends should be sealed with a waterproof sealant to prevent the entrance of contaminants into the handhole.

Steel cable hooks shall be epoxy coated and must meet the specifications set forth in 1006.10. Hooks shall be a minimum of 5/8 in. (16 mm) diameter with 90-degree bend and extend into the handhole at least 6 in. (152 mm). Hooks shall be placed a minimum of 12 in. (305 mm) below the lid or lower if additional space is required.

Precast round handholes shall not be used unless called out on the plans.

The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters. Only handholes serving IDOT traffic signal equipment shall have this label. Handhole covers for Red Light Running Cameras shall be labeled "RLRC".

Revise the third paragraph of Article 814.03 of the Standard Specifications to read:

"Handholes shall be constructed as shown on the plans and shall be cast-in-place or precast concrete units. Heavy duty handholes shall be either cast-in-place or precast concrete units."

Revise Article 814.03(c) of the Standard Specifications to read:

"Precast Concrete. Precast concrete handholes shall be fabricated according to Article 1042.17. Where a handhole is contiguous to a sidewalk, preformed joint filler of 1/2 in. (13 mm) thickness shall be placed between the handhole and the sidewalk."

Add the following to Section 814 of the Standard Specifications:

Cast-In-Place Handholes.

All cast-in-place handholes shall be concrete with minimum inside dimensions of 21-1/2 in. (546 mm). Frames and lid openings shall match this dimension.

For grounding purposes, the handhole frame shall have provisions for a 7/16 in. (11 mm) diameter stainless steel bolt cast into the frame. The covers shall have a stainless steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole cover.

The minimum wall thickness for heavy duty hand holes shall be 1 ft (305mm).

Precast Round Handholes.

All precast handholes shall be concrete with an inside diameter of 30 in. (762mm). Frames and covers shall have a minimum opening of 26 in. (660mm) and no larger than the inside diameter of the handhole.

For grounding purposes, the handhole frame shall have provisions for a 7/16 in. (11 mm) diameter stainless steel bolt cast into the frame. For the purpose of attaching the grounding conductor to the handhole cover, the covers shall either have a 7/16 in. (11 mm) diameter stainless steel bolt cast into the cover or a stainless steel threaded stint extended from an eye hook assembly. A hole may be drilled for the bolt if one cannot be cast into the frame or cover. The head of the bolt shall be flush or lower than the top surface of the cover.

The minimum wall thickness for precast heavy duty hand holes shall be 6 in. (152 mm).

Precast round handholes shall be only produced by an approved precast vendor.

FULL-ACTUATED CONTROLLER AND CABINET

Effective: January 1, 2002

Revised: March 1, 2024

857.02TS

Description.

This work shall consist of furnishing and installing a traffic actuated solid state digital controller in the controller cabinet of the type specified, meeting the requirements of Section 857 of the Standard Specifications, as modified herein, including malfunction management unit, load switches and flasher relays, and all necessary connections for proper operation.

If the intersection is part of an existing system and/or when specified in the plans, this work shall consist of furnishing and installing a(n) "_____" brand traffic actuated solid state controller.

Materials.

Add the following to Article 857.02 of the Standard Specifications:

"Controllers shall be Econolite Cobalt or Eagle/Yunex M60 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved Vendors will be allowed. The controller shall be of the most recent approved model and software version supplied by the Vendor at the time of the traffic signal TURN-ON unless specified otherwise on the plans or these specifications. A removable controller data key shall also be provided. Individual load switches shall be provided for each vehicle, pedestrian, and overlap phase. The controller shall prevent phases from being omitted during program changes and after all preemption events and shall inhibit simultaneous display of circular yellow and yellow arrow indications.

For integration into an Advanced Traffic Management System (ATMS) such as Centrac, Tactics, or TransSuite, the controller shall have the latest version of approved NTCIP software installed. For operation prior to integration into an ATMS, the controller shall maintain existing communications.”

Revise Article 1074.03 (a) (5) paragraph “b.” to read:

“Thermostatically Controlled Exhaust Fans. The cabinet shall be equipped with two (2) thermostatically controlled exhaust fans. Each fan shall have a minimum air delivery capacity of 100 cfm (2.8 cu m/min) and shall be mounted on self-lubricating ball bearings. The thermostat control shall be adjustable between 91 and 113 °F (33 and 45 °C) and shall be set to turn the fan on at 95 °F (35 °C).”

Add the following to Article 1074.03 of the Standard Specifications:

(a) (6) Cabinets shall be designed for NEMA TS2 Type 1 operation. All cabinets shall be pre-wired for a minimum of eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation.

Revise the second sentence in Article 1074.03 (b) (1) paragraph “a” to read:

“The malfunction management unit shall have a minimum of 16 fully programmable channels.”

Add the following to Article 1074.03 of the Standard Specifications:

- (b) (5) Cabinets – Provide 1/8 in. (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.
- (b) (6) Controller Harness – Provide a TS2 Type 2 “A” wired harness in addition to the TS2 Type 1 harness.
- (b) (7) Surge Protection – Shall be a 120 VAC Single phase Modular filter Plug-in type, supplied from an approved Vendor.
- (b) (8) BIU – shall be secured by mechanical means.
- (b) (9) Transfer Relays – Solid state or mechanical flash relays are acceptable.
- (b) (10) Switch Guards – All switches shall be guarded.
- (b) (11) Heating – One (1) 200 W, thermostatically-controlled, electric heater.
- (b) (12) Lighting – One (1) LED Panel shall be placed inside the cabinet top panel and one (1) LED Panel shall be placed on each side of the pull-out drawer/shelf assembly located beneath the controller support shelf. The LED Panels shall be controlled by a door switch. The LED Panels shall be provided from an approved Vendor.

- (b) (13) The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1-1/2 in. (38mm) deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one (1) complete set of cabinet prints and manuals. This drawer shall support 50 lb (23 kg) in weight when fully extended. The drawer shall open and close smoothly. Drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 18 in. (610mm) wide.
- (b) (14) Plan & Wiring Diagrams – 12 in. x 15 in. (305mm x 406mm) moisture sealed container attached to door.
- (b) (15) Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle preemption and sixteen channels (16) of vehicular operation.
- (b) (16) Field Wiring Labels – All field wiring shall be labeled.
- (b) (17) Field Wiring Termination – Approved channel lugs required.
- (b) (18) Power Panel – Provide a nonconductive shield.
- (b) (19) Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 A.
- (b) (20) Police Door – Provide wiring and termination for plug in manual phase advance switch.

Basis of Payment.

This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET; FULL-ACTUATED CONTROLLER AND TYPE IV STRETCHED CABINET; FULL-ACTUATED CONTROLLER AND TYPE V CABINET; FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET; FULL-ACTUATED CONTROLLER AND TYPE SUPER P STRETCHED CABINET; FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET; FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL; FULL-ACTUATED CONTROLLER AND TYPE IV STRETCHED CABINET, SPECIAL; FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL; FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL); FULL-ACTUATED CONTROLLER AND TYPE SUPER P STRETCHED CABINET (SPECIAL); FULL-ACTUATED CONTROLLER AND TYPE SUPER R CABINET (SPECIAL).

UNINTERRUPTABLE POWER SUPPLY, SPECIAL

Effective: January 1, 2013

Revised: March 1, 2024

862.01TS

This work shall be in accordance with section 862 of the Standard Specification except as modified herein.

Add the following to Article 862.01 of the Standard Specifications:

“The UPS shall have the power capacity to provide normal operation of a signalized intersection that utilizes all LED type signal head optics for a minimum of six (6) hours.”

Add the following to Article 862.02 of the Standard Specifications:

“Materials shall be according to Article 1074.04 as modified in UNINTERRUPTABLE POWER SUPPLY, SPECIAL.”

Add the following to Article 862.03 of the Standard Specifications:

“The UPS shall additionally include, but not be limited to, a battery cabinet, where applicable. For Super P and Super R cabinets, the battery cabinet is integrated to the traffic signal cabinet and shall be included in the cost for the traffic signal cabinet of the size and type indicated on the plans.”

Revise Article 862.04 of the Standard Specifications to read:

Installation.

When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four (4) stainless steel bolts. The UPS cabinet shall be completely enclosed with the bottom and back constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

At locations where UPS is installed and an emergency vehicle priority system is in use, any existing incandescent confirmation beacons shall be replaced with LED lamps in accordance with the District One Emergency Vehicle Priority System specification at no additional cost to the Contract. A concrete apron shall be provided and be in accordance with Articles 424 and 202 of the Standard Specifications. The concrete apron shall also follow the District 1 Standard Traffic Signal Design Detail, Type D for Ground Mounted Controller Cabinet and UPS Battery Cabinet.

For a ground mounted UPS, the UPS shall be mounted on its own Type A concrete foundation which will be paid for separately. A concrete apron shall be provided with a dimension of 36 in. in front of the UPS cabinet, 5 in. deep, and a width sized appropriately to the width of the concrete foundation. The concrete apron shall follow Articles 424 and 202 of the Standard Specifications.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the UPS including the addition of alarms.

Materials.

Revise Article 1074.04(a)(1) of the Standard Specifications to read:

“The UPS shall be line interactive or double conversion and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection(s) normal traffic signal operating load. The UPS must be able to maintain the intersection’s normal operating load plus 20 percent of the intersection’s normal operating load. When installed at a railroad-interconnected intersection, the UPS must maintain the railroad preemption load, plus 20 percent of the railroad preemption-operating load. The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of six (6) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 1000 W active output capacity, with 86 percent minimum inverter efficiency).”

Revise the first paragraph of Article 1074.04(a)(3) of the Standard Specifications to read:

“The UPS shall have a minimum of four (4) sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans.”

Revise Article 1074.04(a)(17) of the Standard Specifications to read:

“When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, cabinet heaters, service receptacles, luminaires, any lighted street name signs, any automated enforcement equipment and any other devices directed by the Engineer.”

Revise Article 1074.04(b)(2) paragraph “b.” of the Standard Specifications to read:

“Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125 in. thick and have a natural mill finish.”

Revise Article 1074.04(b)(2) paragraph “c.” of the Standard Specifications to read:

“No more than three (3) batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four (4) batteries per shelf for a cabinet housing eight batteries.”

Revise Article 1074.04(b)(2) paragraph “e.” of the Standard Specifications to read:

“The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in. (785 mm), a depth of 16 in. (440 mm), and a height of 41 to 48 in. (1.1 to 1.3 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).”

Revise Article 1074.04(b)(2) paragraph "g." of the Standard Specifications to read:

"The door shall open to the entire cabinet, have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three point locking system. The door shall be equipped with a two position doorstop, one a 90° and one at 120°. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided."

Add the following to Article 1074.04(b)(2) of the Standard Specifications:

- j. The battery cabinet shall have provisions for an external generator connection.

Add the following to Article 1074.04(c) of the Standard Specifications:

- (8) The UPS shall include a tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.
- (9) The UPS shall include standard RS-232 and internal Ethernet interface.
- (10) The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate. Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.
- (11) The bypass switch shall include an internal power transfer relay that allows removal of the battery back-up unit, while the traffic signal is connected to utility power, without impacting normal traffic signal operation.

Revise Article 1074.04(d)(3) of the Standard Specifications to read:

"All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic lead calcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted."

Revise Article 1074.04(d)(4) of the Standard Specifications to read:

"Batteries shall be certified by the manufacturer to operate over a temperature range of -13°F to 160 °F (-25°C to 71 °C) for gel cell batteries and -40°F to 140°F (-40°C to 60 °C) for AGM type batteries."

Add the following to Article 1074.04(d) of the Standard Specifications:

- (9) The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the signalized intersection for a minimum of six (6) hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four (4) batteries shall be provided.
- (10) Battery heater mats shall be provided when gel cell type batteries are supplied.

Add the following to Article 1074.04 of the Standard Specifications:

- (e) Warranty. The warranty for an uninterruptable power supply (UPS) and batteries (full replacement) shall cover a minimum of five (5) years from date the equipment is placed in operation.
- (f) Installation. Bypass switch shall completely disconnect the traffic signal cabinet from the utility provider.
- (g) The UPS shall be set-up to run the traffic signal continuously without going to a red flashing condition when switched to battery power unless otherwise directed by the Engineer. The Contractor shall confirm set-up with the Engineer. The continuous operation mode when switched to battery may require modification to unit connections and these modifications are included in the unit price for this item.

Revise Article 862.04 of the Standard Specifications to read:

Basis of Payment.

This work will be paid for at the Contract unit price per each for UNINTERRUPTABLE POWER SUPPLY, SPECIAL, UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED, or UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL. Replacement of emergency vehicle priority system confirmation beacons and any required modifications to the traffic signal controller shall be included in the cost of the UNINTERRUPTABLE POWER SUPPLY, SPECIAL, UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED, or UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL item. The concrete apron and earth excavation required shall be included in the cost of the UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED or UNINTERRUPTABLE POWER SUPPLY AND CABINET, SPECIAL item.

SPLICE FIBER IN CABINET

Effective: November 1, 2023

871.02TS

Description.

This work shall consist of fusion splicing singlemode or multimode fibers in a field cabinet, inside a building, as shown on the plans and/or as directed by the Traffic Engineer.

General.

This pay item shall include splices between existing fiber optic cables and any splices shown on the plans as a bid item. Splices shall be secured in fiber optic splice trays within fiber optic distribution enclosures. All fusion splices shall be secured on aluminum splice trays capable of accommodating the required number of fusion splices, including necessary splice holders and a compatible splice tray cover. The tray dimensions shall not exceed 7.5" x 4.1" x 0.45" and shall be mounted within the enclosure using suitable hardware that allows removal for maintenance purposes without the use of tools. All individual splice trays shall be labelled. Splice trays shall be included in the unit cost of SPLICE FIBER IN CABINET.

The quality of all fiber splices shall be verified by testing and documentation according to Article 801.13(d) of the "Standard Specifications," to the satisfaction of the Traffic Engineer.

All optical fibers shall be spliced to provide continuous runs. Splices shall only be allowed in equipment cabinets, in buildings, as shown on the plans and/or as directed by the Traffic Engineer.

All splices shall be made using a fusion splicer that automatically positions the fibers using a system of light injection and detection. The Contractor shall provide all equipment and consumable supplies.

An OTDR trace and power meter readings must be provided from end point termination to end point termination for any fiber that is spliced.

Basis of Payment.

This work shall be paid for at the contract unit price per each for SPLICE FIBER IN CABINET. The unit price shall include all equipment; materials; fiber optic splice trays; testing and documentation; and labor required to fusion splice singlemode fiber optic cable. Splices involving new fiber optic cable installed under this contract, and any splices shown on the plans as an included item, shall be included in the unit cost of the applicable FIBER OPTIC CABLE of the type, size, and number of fibers specified.

TERMINATE FIBER IN CABINET

Effective: November 1, 2023

871.03TS

Description.

This work shall consist of terminating existing or new fibers in a field cabinet, inside a building, as shown on the plans and/or as directed by the Traffic Engineer.

General.

This pay item shall include splices between existing fiber optic cables and any splices shown on the plans as a bid item. All multimode connectors shall be LC compatible, with ceramic ferrules. Singlemode fiber terminations shall utilize pre-fabricated, factory-terminated (LC compatible with ceramic ferrules) pigtails fusion spliced to bare fibers. The splicing of pigtails for singlemode fibers is included in the cost of TERMINATE FIBER IN CABINET. The prefabricated pigtails shall have all of their fibers color coded to match the singlemode fibers in the fiber optic cable. All fusion splices shall be secured on aluminum splice trays capable of accommodating the required number of fusion splices, including necessary splice holders and a compatible splice tray cover. The tray dimensions shall not exceed 7.5" x 4.1" x 0.45" and shall be mounted within the enclosure using suitable hardware that allows removal for maintenance purposes without the use of tools. All individual splice trays shall be labelled. Splice trays and connector bulkheads shall be included in the cost of TERMINATE FIBER IN CABINET. Connector bulkheads shall be the proper type for the fiber enclosure at the location, and shall be properly secured to the enclosure.

The quality of all fiber splices and terminations shall be verified by OTDR and power meter testing and documented according to Article 801.13(d) of the "Standard Specifications," to the satisfaction of the Traffic Engineer.

All bulkhead connectors / adapters shall be labeled with the fiber numbers and direction (i.e. 13-14N, 1-2W, etc.) with a laminated machine printed label.

Basis of Payment.

This work will be paid for at the contract unit price per each for TERMINATE FIBER IN CABINET. The unit price shall include all equipment; materials; connectors; pigtails; splice trays; bulkheads; testing and documentation; and labor required to terminating each required multimode or singlemode fiber. Terminations involving new fiber optic cable installed under this contract, including any terminations shown on the plans as an included item, shall be included in the unit cost of the applicable FIBER OPTIC CABLE of the type, size, and number of fibers specified.

ELECTRIC CABLE

Effective: May 22, 2002

Revised: July 1, 2015

873.01TS

Delete “or stranded, and No. 12 or” from the last sentence of Article 1076.04 (a) of the Standard Specifications.

Add the following to the Article 1076.04(d) of the Standard Specifications:

Service cable may be single or multiple conductor cable.

EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C

Effective: January 1, 2013

Revised: July 1, 2015

873.03TS

This work shall consist of furnishing and installing lead-in cable for light detectors installed at existing and/or proposed traffic signal installations as part of an emergency vehicle priority system. The work includes installation of the lead-in cables in existing and/or new conduit. The electric cable shall be shielded and have (3) stranded conductors, colored blue, orange, and yellow with a stranded tinned copper drain wire. The cable shall meet the requirements of the vendor of the Emergency Vehicle Priority System Equipment.

Basis of Payment.

This work will be paid for at the contract unit price per foot for EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C, which price shall be payment in full for furnishing, installing and making all electrical connections necessary for proper operations.

TRAFFIC SIGNAL POST

Effective: May 22, 2002

Revised: March 1, 2025

875.01TS

Revise Article 1077.01 (c) of the Standard Specifications to read:

- (c) Anchor Rods. The anchor rods shall be a minimum of 5/8 in. in diameter and 16 in. long and shall be according to Article 1006.09. The anchor rods shall be threaded approximately 6 in. at one end and have a bend at the other end. The first 12 in. at the threaded end shall be galvanized. One each galvanized nut and trapezoidal washer shall be furnished with each anchor rod. The washer shall be properly sized to fully engage and sit flush on all sides of the slot of the base plate.

Revise the first sentence of Article 1077.01 (d) of the Standard Specifications to read:

All steel posts and bases shall be hot dipped galvanized steel according to AASHTO M 111. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with 851.01TS TRAFFIC SIGNAL PAINTING Special Provisions.

PEDESTRIAN SIGNAL POST

Effective: January 1, 2020

Revised:

875.02TS

Description.

This work shall consist of furnishing and installing a metal pedestrian signal post. All installations shall meet the requirements of the "District One Standard Traffic Signal Design Details".

Materials.

- (c) General. The pedestrian signal post shall be designed to support the traffic signal loading shown on the plans. The design and fabrication shall be according to the Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, as published by AASHTO.
- (d) Post. The post shall be made of steel or aluminum and have an outside diameter of 4 1/2 in. The post shall be threaded for assembly to the base. Aluminum posts shall be according to the specifications for Schedule 80 aluminum pipe. Steel posts shall be according to the specifications for Schedule 40 steel pipe.
- (e) Base. The base of a steel post shall be cast iron. The base of an aluminum post shall be aluminum. The base shall be threaded for the attachment to the threaded post. The base shall be approximately 10 in. high and 6 3/4 in. square at the bottom. The bottom of the base shall be designed to accept four 5/8 in. diameter anchor rods evenly spaced in a 6 in. diameter circle. The base shall be true to pattern, with sharp clean cutting ornamentation, and equipped with access doors for cable handling. The door shall be fastened to the base with stainless steel screws. A grounding lug shall be provided inside the base.
- (f) Anchor Rods. The anchor rods shall be 5/8 in. in diameter and 16 in. long and shall be according to Article 1006.09. The anchor rods shall be threaded approximately 6 in. at one end and have a bend at the other end. The first 12 in. at the threaded end shall be galvanized. One each galvanized nut and trapezoidal washer shall be furnished with each anchor rod. The washer shall be properly sized to fully engage and sit flush on all sides of the slot of the base plate.

The aluminum post and base shall be drilled at the third points around the diameter and 1/4 in. by 2 in. stainless steel bolts shall be inserted to prevent the post from turning and wobbling.

- (g) Finish. The steel post, steel post cap and the cast iron base shall be hot-dipped galvanized according to AASHTO M 111. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with 851.01TS TRAFFIC SIGNAL PAINTING Special Provisions. If the post and the base are threaded after the galvanization, the bare exposed metal shall be immediately cleaned to remove all cutting solvents and oils, and then spray painted with two coats of an approved galvanized paint.

The aluminum post shall have a natural finish, 100 grit or finer.

Installation.

The pedestrian signal post shall be erected plumb, securely bolted to a concrete foundation, and grounded to a ground rod according to the details shown on the plans. No more than 3/4 in. of the post threads shall protrude above the base.

A post cap shall be furnished and installed on the top of the post. The post cap shall match the material of the post. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly.

Prior to the assembly, the Contractor shall apply two additional coats of galvanized paint on the threads of the post and the base. The Contractor shall use a fabric post tightener to screw the post to the base.

Basis of Payment.

This work will be paid for at the contract unit price per each for PEDESTRIAN SIGNAL POST, of the length specified.

MAST ARM ASSEMBLY AND POLE

Effective: May 22, 2002

Revised: July 01, 2015

877.01TS

Revise the second sentence of Article 1077.03 (a)(3) of the Standard Specifications to read:

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer.

Add the following to Article 1077.03 (a)(3) of the Standard Specifications:

If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with 851.01TS TRAFFIC SIGNAL PAINTING Special Provisions.

CONCRETE FOUNDATIONS

Effective: May 22, 2002

Revised: March 1, 2024

878.01TS

Add the following to Article 878.03 of the Standard Specifications:

“All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. at the threaded end.

Depending on the foundation type, the top of foundation shall be between 1 in. and 6 in. above finished grade or as directed by the Engineer.

No foundation is to be poured until the Resident Engineer gives their approval as to the depth of the foundation.”

Add the following to the first paragraph of Article 878.05 of the Standard Specifications:

“The concrete apron in front of the cabinet and UPS shall be included in this pay item.”

Revise the first paragraph of Article 878.05 of the Standard Specifications to read:

“Basis of Payment. This work will be paid for at the Contract unit price per foot (meter) of depth of CONCRETE FOUNDATION of the type specified, or CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER for pedestrian post concrete foundations.”

LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAMMED LED SIGNAL HEAD

Effective: May 22, 2002

Revised: March 1, 2025

880.01TS

Materials.

Add the following to Section 1078 of the Standard Specifications:

“LED modules proposed for use and not previously approved by IDOT District One will require independent testing for compliance to current VTCSH-ITE standards for the product and be Intertek ETL Verified. This would include modules from new Vendors and new models from IDOT District One approved Vendors.

The proposed independent testing facility shall be approved by IDOT District One. Independent testing must include a minimum of two (2) randomly selected modules of each type of module (i.e. ball, arrow, pedestrian, etc.) used in the District and include as a minimum Luminous Intensity and Chromaticity tests. However, complete module performance verification testing may be required by the Engineer to assure the accuracy of the Vendor's published data and previous test results. An IDOT representative will select sample modules from the local warehouse and mark the modules for testing. Independent test results shall meet current ITE standards and vendor's published data. Any module failures shall require retesting of the module type. All costs associated with the selection of sample modules, testing, reporting, and retesting, if applicable, shall be the responsibility of the LED module Vendor and not be a cost to this Contract.

All signal heads shall provide 12 in. (300 mm) displays with glossy yellow or black polycarbonate housings. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signals heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints and shall be visible to the inspector at the signal turn-on. Post top mounting collars are required on all posts and shall be constructed of the same material as the brackets.

The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects. LED signal modules which exhibit luminous intensities less than the minimum values specified in Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTCSH], or applicable successor ITE specifications, or show signs of entrance of moisture or contaminants, shall be replaced or repaired. The Vendor's written warranty for the LED signal modules shall be dated, signed by a Vendor's representative, and included in the product submittal to the State. See Article 801.14 of the Standard Specifications for warranty information.

(a) Physical and Mechanical Requirements

(1) Modules can be manufactured under this specification for the following faces:

- a. 12 in. (300 mm) circular, multi-section
- b. 12 in. (300 mm) arrow, multi-section

(2) The maximum weight of a module shall be 4 lb (1.8 kg).

(3) Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.) and shall be weatherproof after installation and connection.

- (4) The lens of the module shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.
- (5) The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.
- (6) Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be 1 in. (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 in. (12.7mm) letters next to the symbol.

(b) Photometric Requirements

- (1) The LEDs utilized in the modules shall be AlInGaP technology for red and InGaN for green and amber indications and shall be the ultra bright type rated for 100,000 hours of continuous operation from -40 °C to 74 °C.

(c) Electrical

- (1) Maximum power consumption for LED modules as per the tables in Article 1078.01.
- (2) Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
- (3) The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).
- (4) When a current of 20 mA AC or less is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.
- (5) The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
- (6) LED arrows shall be wired such that a loss or the failure of one or more LEDs will not result in the loss of the entire module.

(d) Retrofit Traffic Signal Module

The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.

- (1) Retrofit modules can be manufactured under this specification for the following faces:
 - a. 12 in. (300 mm) circular, multi-section
 - b. 12 in. (300 mm) arrow, multi-section
 - (2) Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.
 - (3) The maximum weight of a Retrofit module shall be 4 lb (1.8 kg).
 - (4) Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.) and shall be weatherproof after installation and connection.
 - (5) Electrical conductors for modules, including Retrofit modules, shall be 39-2/5 in. (1 m) in length, with quick disconnect terminals attached.
 - (6) The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.
- (e) The following specification requirements apply to the 12 in. (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.
- (1) The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) or applicable successor ITE specifications for arrow indications.
 - (2) The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.
- (f) The following specification requirement applies to the 12 in. (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.
- (1) The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.

Delete the fourth paragraph of Article 880.03 of the Standard Specifications. Refer to the "Bagging Signal Heads" section of the District 1 Traffic Signal Special Provision 800.01TS TRAFFIC SIGNAL GENERAL REQUIREMENTS."

Basis of Payment.

Add the following to the first paragraph of Article 880.04 of the Standard Specifications:

“The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition.”

Revise the second paragraph of Article 880.04 of the Standard Specifications to read:

If the work consists of retrofitting an existing polycarbonate traffic signal head with light emitting diodes (LEDs), it will be paid for as a SIGNAL HEAD, LED, RETROFIT, of the type specified, and of the particular kind of material, when specified. Price shall be payment in full for removal of the existing module, furnishing the equipment described above including LED modules, all mounting hardware, and installing them in satisfactory operating condition. The type specified will indicate the number of signal faces, the number of signal sections in each signal face and the method of mounting.

LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD

Effective: May 22, 2002

Revised: March 1, 2024

881.01TS

Add the following to the third paragraph of Article 881.03 of the Standard Specifications:

“No mixing of different types of pedestrian traffic signals or displays shall be permitted.”

Delete the fourth paragraph of Article 881.03 of the Standard Specifications. Refer to the “Bagging Signal Heads” section of the District 1 Traffic Signal Special Provision 800.01TS TRAFFIC SIGNAL GENERAL REQUIREMENTS.

Add the following to Article 881.03 of the Standard Specifications:

“Pedestrian Countdown Signal Heads shall be 16 in. (406mm) x 18 in. (457mm) single units with glossy yellow or black polycarbonate housings. All pedestrian head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on.

Each pedestrian signal LED module shall be fully MUTCD compliant and shall consist of double overlay message combining full LED symbols of an Upraised Hand and a Walking Person. “Egg Crate” type sun shields are not permitted. Numerals shall measure 9 in. (229mm) in height and easily identified from a distance of 120 ft (36.6m).”

Materials.

Add the following to Article 1078.02 of the Standard Specifications:

“The module shall operate in one mode: Clearance Cycle Countdown Mode Only. The countdown module shall display actual controller programmed clearance cycle and shall start counting when the flashing clearance signal turns on and shall countdown to “0” and turn off when the steady Upraised Hand (symbolizing Don’t Walk) signal turns on. The module shall not have user accessible switches or controls for modification of cycle.

At power on, the module shall enter a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark.

The module shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The counting unit will go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.

If the controller preempts during the Walking Person (symbolizing Walk), the countdown will follow the controller's directions and will adjust from Walking Person to flashing Upraised Hand. It will start to count down during the flashing Upraised Hand.

If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.

The next cycle following the preemption event shall use the correct, initially programmed values.

If the controller output displays Upraised Hand steady condition and the unit has not arrived to zero or if both the Upraised Hand and Walking Person are dark for some reason, the unit suspends any timing and the digits will go dark.

The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.

The countdown numerals shall be two (2) “7 segment” digits forming the time display utilizing two rows of LEDs.

The LED module shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, “Pedestrian Traffic Control Signal Indications - Part 2: LED Pedestrian Traffic Signal Modules,” or applicable successor ITE specifications, except as modified herein.

The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.

In the event of a power outage, light output from the LED modules shall cease instantaneously.

The LEDs utilized in the modules shall be AlInGaP technology for Portland Orange (Countdown Numerals and Upraised Hand) and GaN technology for Lunar White (Walking Person) indications.

The individual LEDs shall be wired such that a loss or the failure of one or more LED will not result in the loss of the entire module.

See Article 801.14 of the Standard Specifications for warranty information."

Basis of Payment.

Add the following to the first paragraph of Article 881.04 of the Standard Specifications:

"The price shall include furnishing the equipment described above, all mounting hardware, and installing them in satisfactory operating condition."

Add the following to Article 881.04 of the Standard Specifications:

"If the work consists of retrofitting an existing polycarbonate pedestrian signal head and pedestrian countdown signal head with light emitting diodes (LEDs), it will be paid for as a PEDESTRIAN SIGNAL HEAD, LED, RETROFIT, of the type specified, and of the particular kind of material, when specified. Price shall be payment in full for furnishing the equipment described above including LED modules, all mounting hardware, and installing them in satisfactory operating condition."

TRAFFIC SIGNAL BACKPLATE

Effective: May 22, 2002

Revised: March 1, 2024

882.01TS

Revise the first sentence of Article 1078.03 of the Standard Specifications to read:

"All backplates shall be louvered and made of formed ABS plastic or composite aluminum."

Revise the first sentence of the second paragraph of Article 1078.03 of the Standard Specifications to read:

"The backplate shall be composed of one or two pieces."

Delete the second sentence of the fourth paragraph of Article 1078.03 of the Standard Specifications.

Add the following to the fourth paragraph of Article 1078.03 of the Standard Specifications:

“When retro reflective sheeting is specified, it shall be Type ZZ sheeting according to Article 1091.03 and applied in preferred orientation for the maximum angularity according to the vendor’s recommendations. The retroreflective sheeting shall be installed under a controlled environment by the Manufacturer/Vendor before shipment to the Contractor. The formed plastic backplate shall be prepared and cleaned, following recommendations of the retroreflective sheeting Manufacturer.”

DETECTOR LOOP

Effective: May 22, 2002

Revised: March 1, 2024

886.01TS

Procedure.

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall mark the proposed loop locations and contact the Area Traffic Signal Maintenance and Operations Engineer to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the Portland cement concrete surface using the same notification process as above.

Installation.

Revise Article 886.04 of the Standard Specifications to read:

“Loop detectors shall be installed according to the requirements of the “District One Standard Traffic Signal Design Details.” Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw-cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plans.

The detector loop cable insulation shall be labeled with the cable specifications.

Each loop detector lead-in wire shall be labeled in the handhole using a waterproof tag secured to each wire with nylon ties.

Resistance to ground shall be a minimum of 500 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries.

(a) Type I. All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement, curb, and handhole shall be cut with a 1/4 in. (6.3 mm) deep x 4 in. (100 mm) saw cut to mark the location of each loop cable.

- (b) Loop sealant shall be two-component thixotropic chemically cured polyurethane from an approved Vendor. The sealant shall be installed 1/8 in. (3 mm) below the pavement surface. If installed above the surface, the excess shall be removed immediately.
- (c) Preformed. This work shall consist of furnishing and installing a rubberized or cross-linked polyethylene heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:
 - (1) Preformed detector loops shall be installed in the sub-base under the Portland cement concrete pavement. Loop lead-ins shall be extended to a temporary protective enclosure near the proposed handhole location. The protective enclosure shall provide sufficient protection from other construction activities and may be buried for additional protection.
 - (2) Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. CNC, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.
 - (3) Preformed detector loops shall be factory assembled with ends capped and sealed against moisture and other contaminants. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using a minimum 5/8 in. (16 mm) outside diameter, minimum 3/8 in. (9.5 mm) inside diameter Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kPa) internal pressure rating or a similarly sized XLPE cable jacket. The hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to ensure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. For XLPE jacketed preformed loops, all splice connections shall be soldered, sealed, and tested before being sealed in a high impact glass impregnated plastic splice enclosure. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of eight turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to ensure complete moisture blockage and further protect the wire. The preformed loops shall be constructed to allow a minimum of 6-1/2 ft of extra cable in the handhole."

Method of Measurement.

Add the following to Article 886.05 of the Standard Specifications:

“Preformed detector loops will be measured along the detector loop embedded in the pavement rather than the actual length of the wire. Detector loop measurements shall include the saw cut and the length of the detector loop wire to the edge of pavement. The detector loop wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be included in the price of the detector loop. CNC, trench and backfill, and drilling of pavement or handholes shall be included in detector loop quantities.”

Basis of Payment.

This work shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP as specified in the plans, which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

VIDEO VEHICLE DETECTION SYSTEM

Effective: January 1, 2020

Revised: March 1, 2024

886.04TS

Description.

This work shall consist of furnishing and installing a video vehicle detection system as specified and/or as shown on the plans. This pay item shall include all necessary work and equipment required to have a fully operational system including but not limited to the detector unit(s), the interface unit and all the necessary hardware, cables, and accessories required to complete the installation in accordance with the manufacturer's specifications.

The video vehicle detection system shall work under all weather conditions, including rain, freezing rain, snow, wind, dust, fog, and changes in temperature and light. It shall work in an ambient temperature range of -30°F to 165°F.

The video vehicle detection system shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation. The video vehicle detection system shall provide a minimum of one interface unit that has Ethernet connectivity, surge protection and shall be capable of supporting a minimum of 2 detector units. The video vehicle detection system shall include a display and stand inside the cabinet that has a minimum 10 in. screen with a minimum 1280 x 800 resolution. The display shall be temperature rated for the cabinet environment.

The video vehicle detection system shall be one of the following systems or an approved equivalent:

- Autoscope Vision
- Iteris Vantage Next

A representative from the supplier of the video vehicle detection system shall supervise the installation and testing of the video vehicle detection system and shall be present at the traffic signal turn-on inspection. Once the video vehicle detection system is configured, it shall not need reconfiguration to maintain performance, unless the roadway configuration or the application requirements change.

The mounting location(s) of the detector unit(s) shall be per the manufacturer's recommendations. If an extension mounting assembly is needed, it shall be included in this item. All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The video detection system shall be warrantied for a period of two (2) years from final inspection and shall be free from material and workmanship defects.

Basis of Payment.

This work shall be paid for at the Contract unit price each for VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH, the price of which shall include the cost for all of the work and material described herein and includes furnishing, installing, delivery, handling, testing, set-up and all appurtenances and mounting hardware necessary for a fully operational video vehicle detection system.

EMERGENCY VEHICLE PRIORITY SYSTEM

Effective: May 22, 2002

Revised: July 1, 2015

887.01TS

Revise Section 887 of the Standard Specifications to read:

It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle pre-emption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency.

All new installations shall be equipped with Confirmation Beacons as shown on the "District One Standard Traffic Signal Design Details." The Confirmation Beacon shall consist of a 6 watt Par 38 LED flood lamp with a 30 degree light spread, or a 7 watt Par 30 LED flood lamp with a 15 degree or greater spread, maximum 7 watt energy consumption at 120V, and a 2,000 hour warranty for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signaled by a flashing indication at the rate specified by Section 4L.01 of the "Manual on Uniform Traffic Control Devices," and other applicable sections of future editions. The stopped pre-empted movements shall be signaled by a continuous indication.

All light operated systems shall include security and transit preemption software and operate at a uniform rate of 14.035 Hz ± 0.002 , or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the EMERGENCY VEHICLE PRIORITY SYSTEM.

Basis of Payment.

The work shall be paid for at the contract unit price each for furnishing and installing LIGHT DETECTOR and LIGHT DETECTOR AMPLIFIER. Furnishing and installing the confirmation beacon shall be included in the cost of the Light Detector. Any required modifications to the traffic signal controller shall be included in the cost of the LIGHT DETECTOR AMPLIFIER. The preemption detector amplifier shall be paid for on a basis of (1) one each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

OUTDOOR RATED NETWORK CABLE

Effective: November 1, 2023

887.04TS

Description.

This work shall consist of furnishing and installing a network cable from the traffic signal cabinet to the associated field device as shown on the plans

Materials.

The outdoor rated network cable shall be a black Category 5e cable, meeting the TIA/EIA 568-B.2 telecommunication standards. The cable shall be composed of 24 AWG solid bare copper conductors, twisted pairs, polyolefin insulation, inner LLPE jacket, overall shield (100% coverage), 24 AWG stranded TC drain wire, industrial grade sunlight- and oil-resistant LLPE jacket. The cable shall be capable of performing from -40 °F to 160 °F.

Each end of the cable shall be terminated with an RJ-45 connector installed according to the TIA/EIA 568B standard. The drain wire at the cabinet end shall be terminated with a ring lug and attached to a suitable ground point.

The work shall be performed according to the applicable portions of Section 873 of the "Standard Specifications", and details as shown on the plans.

Basis of Payment.

This work will be paid for at the contract unit price per foot for OUTDOOR RATED NETWORK CABLE, the unit price shall include all equipment, materials and labor required to furnish and install the cable and making all connections necessary for proper operation. The unit price shall also include furnishing and installing the RJ-45 connectors, ring terminals and grounding the cable.

ACCESSIBLE PEDESTRIAN SIGNALS

Effective: April 1, 2003

Revised: March 1, 2025

888.02TS

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

Add the following to Article 888.03 of the Standard Specifications:

“A mounting bracket and/or extension must be used to assure proper orientation and accessibility where needed. The bracket and/or extension is included in the cost of the pedestrian push-button. The Contractor is not allowed to install a push-button assembly with the sign below the push-button to meet mounting requirements.”

Add the following to Article 1074.02 of the Standard Specifications:

“Stations must be designed to be mounted to a post, mast arm pole or wood pole. The station must be aluminum and must accept a 3 in. round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD sign series R10-3e 9 in. x 15 in. sign with arrow(s) for a countdown pedestrian signal. Stations must be powder coated yellow with a black push-button and a stainless steel tactile arrow on the push-button.”

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

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

Audible Indications. A push-button locator tone must sound at each push-button and must be deactivated during the associated walk indication and when associated traffic signals are in flashing mode. Push-button locator tones must have a duration of 0.15 seconds or less and must repeat at 1 second intervals. Each actuation of the push-button must be accompanied by the speech message “Wait”. Locator tones must be audible 6 to 12 ft from the push-buttons.

If two accessible pedestrian push-buttons are placed less than 10 ft apart or placed on the same pole, the audible walk and don't walk indication must be a speech message. This speech message must sound throughout the Walk interval only. The common street name must be used and not the route number of the street unless there is no common street name. Locations without a street name (ex: private benefit driveways, shopping plaza entrances, etc.) must use the general term “Commercial Driveway” as a street name for that leg. The speech message must be modeled after: “[Street Name]. Walk Sign is on to cross [Street Name].” For signalized intersections utilizing exclusive pedestrian phasing, the verbal message must be “Walk sign is on for all crossings”. Speech walk messages should not contain any additional information, except they should include designations such as “Street” or “Avenue” where this information is necessary to avoid ambiguity at a particular location.

In addition, a speech push-button information message must be provided by actuating the APS push-button during the Don't Walk interval. This verbal message must be modeled after: "Wait". The extended press option verbal message must be: "Wait to cross [Street Name] at [Street Name]".

Where two accessible pedestrian push-buttons are separated by 10 ft or more, the Walk indication must be an audible percussive tone. The percussive tone must repeat at 8 to 10 ticks per second with a dominant frequency of 880 Hz. Percussive tones must be uniform at all stations at the intersection and must not change for different directions.

Automatic volume adjustments in response to ambient traffic sound level must be provided up to a maximum volume of 100 dB. Locator tones and speech messages must be no more than 5 dB louder than ambient sound. Locator tones and speech messages must be programmed at the same volume; one must not be significantly louder than the other and must be adjusted as directed by the Engineer.

Railroad Preemption.

At locations interconnected to a railroad crossing, APS push-buttons must be capable of receiving a railroad preemption similar to a traffic signal controller and must be hard wired to the railroad preemption relay inside the traffic signal cabinet. A shelf mount control unit must be provided and installed inside the cabinet capable of receiving and transmitting the railroad preemption to all the push-buttons.

At railroad intersections, all APS push-buttons must use speech messages only and must follow the below speech models.

During Don't Walk: "Wait to cross [Street Name] at [Street Name]. Caution, Walk time shortened when train approaches." – this does not repeat, plays only once with every push-button press.

During Walk: "[Street Name.] Walk sign is on to cross [Street Name]" – this repeats as many times as possible during Walk interval only.

During Railroad preemption: All push-buttons simultaneously state "Train Approaching" – this message must be stated two (2) times.

At locations with emergency vehicle preemption (EVP), no additional speech message will be provided during preemption.

At locations with an equestrian push-button style installation, the APS push-buttons must use speech messages only and must emit the audible message from the bottom mounted push-button only.

Locations with Corner Islands or Center Medians

At locations with corner islands, push-buttons must follow the requirements as specified herein regarding the use of a percussive tone vs. a speech message. When push-buttons are closer than 10 ft apart, the speech message must follow the format specified herein for the main street crossing. The speech message must follow the below speech models for the unusual configurations.

Crossing of the right turn lane to or from corner island: "Wait to cross right turn lane for [Street Name] at [Street Name]" and "Walk sign is on to cross right turn lane for [Street Name] at [Street Name]".

Crossing to refuge island where second push-button actuation is required: "Wait to cross [Street Name] at [Street Name] to median with second push-button" and "Walk sign is on to cross [Street Name] to median with second push-button".

Center medians on divided highways with a single push-button must have a dual tactile arrow on the push-button.

Pedestrian Push-button. Pedestrian push-buttons must be at least 2 in. (50 mm) in diameter or width. The force required to activate the push-button must be no greater than 3.5 lb (15.5 N).

A red LED must be located on or near the push-button which, when activated, acknowledges the pedestrian's request to cross the street.

APS push-button systems that utilize any wireless technology to place calls or communicate with the traffic signal controller, including Bluetooth technology, will not be allowed. A central control unit must be provided and installed in the traffic signal cabinet with the latest available firmware. Push-buttons must be connected directly to the central control unit in the traffic signal cabinet using only 2 wires. All push-buttons must be capable of placing a pedestrian call request into the controller and must be hard wired. APS push-buttons must be a direct replacement of existing standard push-buttons and must be weather resistant with a minimum warranty of five (5) years.

APS push-buttons must be compatible with one another and easily replaceable on future replacements or maintenance repairs. Multiple model variations will not be allowed.

All APS push-buttons must come with speech messages pre-programmed for each particular intersection regardless of their location or distance of separation. Final field adjustments, including the use of percussive tones or speech messages, must be completed once push-buttons are installed in the final location. All push-buttons must be programmed with the appropriate parameters and settings as directed by the Engineer. These settings must be standard for all push-buttons and will vary based on the manufacturer. Access to push-button settings must be provided via an application either through wired, wireless or Bluetooth connection. Push-button information, settings and access instructions must all be provided in a weatherproof pouch and safely stored inside each traffic signal cabinet.

The Contractor must remove any existing pedestrian isolation boards, field wire terminals and any wires to the board when easily accessible. If the pedestrian isolation board has been installed from the factory on the back panel of the cabinet, the Contractor is to disconnect the power to the isolation board and any wires while leaving the board mounted. This work is included in the cost of APS and will not be paid for separately.

Signage. A sign must be located immediately above the pedestrian push-button and parallel to the crosswalk controlled by the push-button. The sign must conform to the following standard MUTCD design: R10-3e.



R10-3e

Tactile Arrow. A tactile arrow, pointing in the direction of travel controlled by a push-button, must be provided on the push-button.

Vibrotactile Feature. The push-button must pulse when depressed and must vibrate continuously throughout the Walk interval.

Basis of Payment. This work will be paid for at the contract unit price per each for ACCESSIBLE PEDESTRIAN SIGNALS and includes furnishing, installation, mounting hardware, extension brackets, and programming of the push-button.

TEMPORARY TRAFFIC SIGNAL INSTALLATION

Effective: May 22, 2002

Revised: March 1, 2025

890.01TS

Revise Section 890 of the Standard Specifications to read:

Description.

This work shall consist of furnishing, installing, maintaining, and removing a temporary traffic signal installation as shown on the plans, including but not limited to temporary signal heads, emergency vehicle priority systems, interconnect, vehicle detectors, uninterruptable power supply, and signing. When temporary traffic signals will be operating within a traffic signal system, the equipment shall be compatible with the current operating requirements of the system. For integration into an Advanced Traffic Management System (ATMS) such as Centrac, Tactics, or TransSuite, the controller shall have the latest version of approved NTCIP software installed.

General.

Only an approved controller Vendor will be allowed to assemble a temporary traffic signal and railroad traffic signal cabinet. Traffic signal inspection and TURN-ON shall be according to 800.01TS TRAFFIC SIGNAL GENERAL REQUIREMENTS special provision.

Construction Requirements.

- (a) Controllers. Only controllers supplied by one of the District approved Vendors will be approved for use at temporary signal locations. All controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software approved by IDOT District 1, installed in NEMA TS2 cabinets with 8 phase back panels, capable of supplying 255 seconds of cycle length and individual phase length settings up to 99 seconds. On projects with one lane open and two-way traffic flow, such as bridge deck repairs, the temporary signal controller shall be capable of providing an adjustable all red clearance setting of up to 250 seconds in length. All controllers used for temporary traffic signals shall meet or exceed the requirements of Section 857 of the Standard Specifications with regards to internal time base coordination and preemption. All railroad interconnected temporary controllers and cabinets shall be new and shall satisfy the requirements of Article 857.02 of the Standard Specifications and as modified herein. On projects with multiple temporary traffic signal installations, all controllers shall be the same Manufacturer brand and model number with the latest version software installed at the time of the signal TURN-ON, or as specified in the Contract.
- (b) Cabinets. Only control equipment, including controller cabinet and peripheral equipment, supplied by one of the District approved Vendors will be approved for use at temporary traffic signal locations. All control equipment for the temporary traffic signal(s) shall be furnished by the Contractor unless otherwise stated in the Contract. All temporary traffic signal cabinets shall have a closed bottom. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust, animal, and insect-proof seal. The bottom shall provide a minimum of two (2) 4 in. (100 mm) diameter holes to run the electric cables through. The 4 in. (100 mm) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.
- (c) Grounding. Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 806 of the Standard Specifications and shall meet the requirements of the "Grounding of Traffic Signal Systems" section of 800.01TS TRAFFIC SIGNAL GENERAL REQUIREMENTS special provision.

(d) Traffic Signal Heads. All traffic signal sections shall be 12 in. (300 mm). Pedestrian signal sections shall be 16 in. (406mm) x 18 in. (457mm). All signal heads shall be furnished with tunnel visors unless otherwise specified in the contract. Traffic signal sections shall be Light Emitting Diode (LED) with expandable view, unless otherwise approved by the Engineer. Pedestrian signal heads shall be LED Pedestrian Countdown Signal Heads. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Engineer. If no traffic staging is in place or will not be staged on the day of the turn on, the temporary traffic signal shall have the signal head displays, signal head placements and controller phasing match the existing traffic signal or shall be as directed by the Engineer. The Contractor shall furnish enough extra cable length to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

(e) Interconnect.

(1) Temporary traffic signal interconnect shall be provided using fiber optic cable or wireless interconnect technology as specified in the Contract. If the Contract specifies fiber optic cable to be used for temporary interconnect, the Contractor may request, in writing, to substitute the fiber optic temporary interconnect with a wireless interconnect. The Contractor must provide assurances that the radio device will operate properly at all times and during all construction staging. If approved for use by the Engineer, the Contractor shall submit marked-up traffic signal plans indicating locations of radios and antennas and installation details. If wireless interconnect is used, and in the opinion of the Engineer it is not viable, or if it fails during testing or operations, the Contractor shall be responsible for installing all necessary poles, fiber optic cable, and other infrastructure for providing temporary fiber optic interconnect at no cost to the Contract.

(2) The existing system interconnect and phone lines are to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. If the existing traffic signal has a cellular modem, the modem shall be temporarily relocated to the temporary signal and then back to the existing or proposed cabinet at the end of the contract unless the contract specifies otherwise. The temporary signal cabinet shall have an antenna supplied by the Contractor. Any existing network switches shall be temporarily relocated to the temporary signal and relocated back to the existing cabinet at the end of construction if a new switch is not being installed. Any existing pan-tilt-zoom (PTZ) cameras shall be temporarily relocated to the temporary signal. The interconnect, including any required fiber splices and terminations, shall be installed into the temporary controller cabinet as per the notes or details on the plans. All labor and equipment required to install and maintain the existing interconnect as part of the Temporary Traffic Signal Installation shall be included in the cost of TEMPORARY TRAFFIC SIGNAL INSTALLATION. The temporary traffic signal interconnect shall maintain interconnect communications throughout the entire signal system for the duration of the project.

(3) Temporary wireless interconnect for closed-loop systems. The radio interconnect system shall be compatible with Eagle/Yunex or Econolite controller closed loop systems. This work shall include all temporary wireless interconnect components at the adjacent existing traffic signal(s) to provide a completely operational closed loop system. This work shall include all materials, labor and testing to provide the completely operational closed loop system as shown on the plans. The radio interconnect system shall include the following components:

- a. Rack or Shelf Mounted RS-232 Frequency Hopping Spread Spectrum (FHSS) Radio
- b. Software for Radio Configuration (Configure Frequency and Hopping Patterns)
- c. Antennas (Omni Directional or Yagi Directional)
- d. Antenna Cables, LMR400, Low Loss. Maximum 100 ft from controller cabinet to antenna
- e. Brackets, Mounting Hardware, and Accessories Required for Installation
- f. RS232 Data Cable for Connection from the radio to the local or master controller
- g. All other components required for a fully functional radio interconnect system

All controller cabinet modifications and other modifications to existing equipment that are required for the installation of the radio interconnect system components shall be included in the cost of TEMPORARY TRAFFIC SIGNAL INSTALLATION.

The radio interconnect system may operate at 900Mhz (902-928) or 2.4 Ghz depending on the results of a site survey. The telemetry shall have an acceptable rate of transmission errors, time outs, etc. comparable to that of a hardwire system.

The proposed or existing master controller and telemetry module shall be configured for use with the radio interconnect at a minimum rate of 9600 baud.

The radio interconnect system shall include all other components required for a complete and fully functional telemetry system and shall be installed in accordance with the Vendor's recommendations.

Temporary wireless interconnect for Advanced Traffic Management Systems. The radio interconnect system shall be compatible with an ATMS.

- (f) Emergency Vehicle Preemption. All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the Contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District. All labor and material required to install and maintain the Emergency Vehicle Preemption installation shall be included in the item TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- (g) Vehicle Detection. All temporary traffic signal installations shall have vehicular detection installed at all approaches of the intersection and as directed by the Engineer. Video vehicle detection systems shall be approved by IDOT prior to the Contractor furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the video vehicle detection system in accordance to the Manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. The Vendor shall be present and assist the contractor in setting up the video vehicle detection system. An in-cabinet video monitor shall be provided with all video vehicle detection systems and shall be included in the item TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- (h) Pedestrian push-buttons. Pedestrian push-buttons shall be provided for all pedestrian signal heads/phases or as directed by the Engineer. Accessible Pedestrian Signal (APS) buttons shall be installed at any location where they currently exist. All push-buttons shall be latching and have MUTCD R10-3e signs with proper arrows.
- (i) Uninterruptable Power Supply. All temporary traffic signal installations shall have an Uninterruptable Power Supply (UPS). The UPS cabinet shall be mounted to the temporary traffic signal cabinet and shall be according to the applicable portions of Section 862 of the Standard Specifications and as modified in the current District One Traffic Signal Special Provision 862.01TS UNINTERRUPTABLE POWER SUPPLY, SPECIAL.

- (j) Signs. All existing signs shall be removed from existing poles and relocated to the temporary signal. If new mast arm assembly and pole(s) and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost. Any signs that are required for the temporary traffic signal shall be provided as shown on the plans or as directed by the Engineer. Relocation, removing, bagging and installing signs for the various construction stages shall be provided as shown on the plans or as directed by the Engineer. If Illuminated Street Name Signs exist, they shall be taken down and stored by the Contractor, and the Contractor shall furnish reflectorized street name signs on the temporary traffic signal installation.
- (k) Energy Charges. The electrical utility energy charges for the operation of the temporary traffic signal installation shall be paid for by others if the installation replaces an existing signal. Otherwise, charges shall be paid for under 109.05 of the Standard Specifications.
- (l) Maintenance.
 - (1) Maintenance shall meet the requirements of the Standard Specifications and the "Maintenance and Responsibility of Traffic Signal and Flashing Beacon Installations" section of the current District One Traffic Signal Special Provision 800.01TS TRAFFIC SIGNAL GENERAL REQUIREMENTS.
 - (2) Maintenance of temporary signals and of the existing signals shall be included in the cost of the TEMPORARY TRAFFIC SIGNAL INSTALLATION pay item. When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as they begin any physical work on the Contract or any portion thereof.
 - (3) The temporary signal responsibility shall begin at the start of temporary signal construction and shall end with the removal of the signal as directed by the Engineer.
- (m) Temporary Traffic Signals for Bridge Projects. Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, Special Provisions and any plans for Bridge Temporary Traffic Signals included in the Contract. The installation shall meet the Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION specification. In addition, all electric cable shall be aurally suspended at a minimum height of 18 ft (5.5m) on temporary wood poles (Class 5 or better) of 45 ft (13.7 m) minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole as shown in the plans, or as directed by the Engineer. A video vehicle detection system may be used in place of detector loops as approved by the Engineer or as shown in the Contract.

(n) Temporary Portable Traffic Signal for Bridge Projects.

- (1) The controller and cabinet shall be NEMA type designed for NEMA TS2 Type 1 operation. Controller and LED signal displays shall meet the applicable Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION special provision.
- (2) Work shall be according to Article 701.18(b) of the Standard Specifications except as noted herein.
- (3) General.
 - a. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of twelve (12) days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.
 - b. All signal heads located over the travel lane shall be mounted at a minimum height of 17 ft (5 m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 ft (2.5 m) from the bottom of the signal back plate to the top of the adjacent travel lane surface.
 - c. The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.
 - d. As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with other approved methods of vehicle detection and traffic actuation.
 - e. All portable traffic signal units shall be interconnected using hardwire communication cable. Radio communication equipment may be used only with the approval of the Engineer. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.

- f. The temporary portable bridge traffic signal system shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV and other applicable portions of the currently adopted version of the Manual on Uniform Traffic Control Devices (MUTCD) and the Illinois MUTCD. The signal system shall be designed to continuously operate over an ambient temperature range between -30°F (-34°C) and 120°F (48°C). When not being utilized to inform and direct traffic, portable signals shall be treated as non-operating equipment according to Article 701.11.

Basis of Payment.

This work shall be paid for at the Contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION, the price of which shall include all costs for the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, video vehicle detection systems, any maintenance or adjustment to the video vehicle detection system, the temporary wireless interconnect system, temporary fiber optic interconnect system, all material required, the installation and complete removal of the temporary traffic signal, and any changes required by the Engineer. Each location will be paid for separately.

TEMPORARY TRAFFIC SIGNAL TIMING

Effective: May 22, 2002

Revised: March 1, 2024

890.02TS

Description.

This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the duration of the temporary signalized condition, as well as impact to existing traffic signal timings caused by detours or other temporary conditions.

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

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMING:

- (a) Consultant shall attend temporary traffic signal inspection (turn-on) and/or detour meeting and conduct on-site implementation of the traffic signal timings.
- (b) Consultant shall be responsible for making fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.
- (c) Consultant shall provide monthly observation of traffic signal operations in the field.

- (d) Consultant shall provide on-site consultation and adjust timings as necessary for construction stage changes, temporary traffic signal phase changes, and any other conditions affecting timing and phasing, including lane closures, detours, and other construction activities.
- (e) Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Maintenance and Operations Engineer.
- (f) Return original timing plan once construction is complete.

Basis of Payment.

The work shall be paid for at the Contract unit price each for TEMPORARY TRAFFIC SIGNAL TIMING, which price shall be payment in full for performing all work described herein per intersection. When the temporary traffic signal installation is turned on and/or detour implemented, 50 percent of the bid price will be paid. The remaining 50 percent of the bid price will be paid following the removal of the temporary traffic signal installation and/or detour.

REMOVE EXISTING DOUBLE HANDHOLE

Description. This work shall consist of the removal and disposal of existing double handholes according to Section 895 of the Standard Specifications

Basis of Payment. This work shall be paid for at the contract unit price per each for REMOVE EXISTING DOUBLE HANDHOLE.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Effective: May 22, 2002

Revised: March 1, 2024

895.02TS

Add the following to Article 895.05 of the Standard Specifications:

“The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor’s expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the State's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within thirty (30) days of removing it from the traffic signal installation. The Contractor shall provide one hard copy and one electronic file of a list of equipment that is to remain the property of the State, including model and serial numbers, where applicable. The Contractor shall also provide a copy of the Contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned according to these requirements, it will be rejected by the State's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time Contractor takes maintenance of the signal installation until approval by the Department. A delivery receipt will be signed by the State's Electrical Maintenance Contractor indicating the items have been returned.

The Contractor shall safely store and arrange for pick up or delivery of all equipment to be returned to agencies other than the State. The Contractor shall package the equipment and provide all necessary documentation as stated above.

Traffic signal equipment which is lost, damaged, or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications at no cost to the contract."

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT

Description. This work shall consist of removing and relocating traffic signal equipment in accordance with Section 895 of the Standard Specifications and as shown in the plans.

Basis of Payment. This work will be paid for at the contract unit price for RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT, the price of which shall include the cost for all work and material described herein per intersection.

FILLING EXISTING RUMBLE STRIPS

Description: This work shall consist of the scarification of existing centerline rumble strips constructed in hot-mix asphalt pavement, and the furnishing and placement of hot-mix asphalt in the scarified area, prior to shifting traffic over the centerline in a construction stage. This work shall take place per the limits shown on the Plans and/or as directed by the Engineer.

General Requirements: The nominal depth of scarification of the hot-mix asphalt pavement shall be 2 inches. Unless otherwise shown on the Plans, the width of the Scarification shall be 3 feet, as measured centered on the existing pavement centerline.

Method of Measurement: FILLING EXISTING RUMBLE STRIP will be measured for payment in feet. Any portion of this work constructed outside the dimensions shown on the Plans or as directed by the Engineer will not be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price per FOOT for FILLING EXISTING RUMBLE STRIP, which price shall constitute full compensation for scarifying the designated portion of hot-mix asphalt shoulder; cleaning the scarified area and removing all debris; applying tack; furnishing, placing, and compacting hot-mix asphalt surface mix; and for all labor, equipment, tolls, and incidentals necessary to complete the work as specified.

EROSION CONTROL BLANKET (SPECIAL)

This Detailed Specification revises Section 251 of the Standard Specifications to eliminate the use of Excelsior Blanket for Erosion Control Blanket. This work shall consist of furnishing, transporting, and placing 100% biodegradable erosion control blanket over seeded areas as detailed on the plans, according to Section 251 except as modified herein.

Delete Article 1081.10(1) Excelsior Blanket.

Delete the first paragraph of Article 1081.10(b) Knitted Straw Mat and substitute the following:

“Knitted Straw Mat. Knitted straw mat shall be a machine-produced mat of 100% clean, weed free agricultural straw. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the blanket. The blanket shall be covered on the top side with a 100% biodegradable woven natural organic fiber netting. No plastic netting will be allowed. The top netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands to form an approximate 0.50 x 1.0 inch (1.27 x 2.54 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) center with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches (5-12.5 cm) from the edge) as an overlap guide for adjacent mats.

Short-term photodegradable erosion control blanket will not be allowed.

Delete Article 1081.10(d) Wire Staples. Wire staples will not be allowed.

No plastic stakes, including biodegradable plastic, will be allowed.”

Add the following to Article 1081.10(e) Wood Stakes:

“Wood stakes shall be untreated and biodegradable within 9 to 12 months.”

Method of Measurement: This work will be measured for payment in square yards.

Basis of Payment: This work will be paid for at the contract unit price per square yards for EROSION CONTROL BLANKET (SPECIAL).

404 PERMIT



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, CHICAGO DISTRICT
231 SOUTH LA SALLE STREET, SUITE 1500
CHICAGO IL 60604-1437

November 5, 2024

Regulatory Branch (LRC-2024-00274)

SUBJECT: Nationwide Permit Authorization for 0.116 ac of Permanent Impacts
Associated with The Proposed Intersection Improvements at IL Route 58 at Barrington
Road, Hoffman Estates, Cook County, Illinois (Latitude 42.046432°N, Longitude -
88.144623°W)

IDOT Contract 62N97

Jose Rios
Illinois Department of Transportation
201 West Center Court
Schaumburg, Illinois 60196

Dear Mr. Rios:

The U.S. Army Corps of Engineers, Chicago District, has completed its review of your pre-construction notification for the above referenced project, dated October 4, 2024, for authorization under the Nationwide Permit (NWP) Number 14 (NWP 14 Linear Transportation Projects), submitted on your behalf by EKF Moen, LLC. This office has verified that your proposed activity complies with the terms and conditions of the NWP.

This determination covers only your project as described above and in the approved project plans titled, "Proposed Highway Plans FAP Route 559 IL 58 (Golf Rd) At Barrington Road, Section 2021-060-SW-TS&N", plot date November 7, 2023, prepared by EFK Moen. Caution must be taken to prevent construction materials and activities from impacting waters of the United States beyond the scope of this authorization. If the design, location, or purpose of the project is changed, it is recommended that you contact this office to determine the need for further authorization.

The subject activity may be performed without further authorization from this office provided that the activity complies with the NWP terms and general conditions, the regional conditions for Illinois, the special conditions listed below, and the Section 401 Water Quality Certification ("WQC") conditions added by the Illinois Environmental Protection Agency ("IEPA"). The NWP Program terms, general conditions, and regional conditions are listed in the enclosed NWP Summary. The WQC conditions are listed in the enclosed Fact Sheet.

Specifically, we wish to draw your attention to General Condition 21, which requires permittees to notify our office immediately in the event of discovery of previously unknown human remains, Native American cultural items, or archaeological artifacts; and a term of the NWP program, which states that NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

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In addition to the general, regional, and water quality conditions of this permit verification, the following special conditions also apply to this verification:

1. To avoid potential impacts to the northern long-eared bat (*Myotis septentrionalis*), tree clearing (trees 3" DBH or greater) shall only occur between October 1 and March 31 of any construction year.
2. This authorization is contingent upon implementing and maintaining soil erosion and sediment controls in a serviceable condition throughout the duration of the project. You shall comply with the project's soil erosion and sediment control (SESC) plans and the installation and maintenance requirements of the SESC practices on-site. You shall notify this office any changes or modifications to the approved plan set. Please be aware that field conditions during project construction may require the implementation of additional SESC measures for further protection of aquatic resources. If you fail to implement corrective measures, this office may require more frequent site inspections to ensure the installed SESC measures are acceptable. Please be aware that work authorized herein may not commence until you receive written notification from this office that your plans meet technical standards.

As part of the SESC process, you are required to retain a qualified Independent SESC Inspector (ISI) to review the project's SESC plans and provide a detailed narrative that explains the measures to be implemented at the project site. The ISI is also required to perform site inspections of the implemented SESC measures to ensure proper installation and regular maintenance of the approved methods.

- a. You shall contact this office and the ISI at least 10 calendar days prior to the preconstruction meeting so that a representative of this office may attend. The meeting agenda will include a discussion of the SESC plan and the installation and maintenance requirements of the SESC practices on the site;
- b. Prior to commencement of any in-stream work, you shall submit construction plans and a detailed narrative to this office that disclose the contractor's preferred method of cofferdam and dewatering method;
- c. The ISI will perform weekly inspections of the implemented SESC measures to ensure proper installation and regular maintenance of the approved methods. The ISI contact information form shall be submitted to this office via e-mail and/or hard copy prior to commencement of the permitted work; and
- d. The ISI shall submit to the Corps an inspection report with digital photographs of the SESC measures on a weekly basis during the active and non-active phases of construction. An inspection report shall also be submitted at the completion of the project once the SESC measures have been removed and final stabilization has been completed.

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3. Prior to commencement of work, you shall submit constructions plans and a narrative of the contractor's preferred method of cofferdam and dewatering as necessary. Work in the waterway shall not commence until this office notifies you, in writing, that the plans have been approved.
4. You shall provide written notification to this office at least ten (10) days prior to the commencement of work indicating the start date and estimated end date of construction. If possible, this notification should be provided by email to patrick.j.verhalen@usace.army.mil.
5. You are responsible for all work authorized herein and for ensuring that all contractors are aware of the terms and conditions of this authorization.
6. A copy of this authorization must be present at the project site during all phases of construction.
7. Work in the waterway should be timed to take place during low or no-flow conditions. Low flow conditions are flow at or below the normal water elevation.
8. The plan must be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the cofferdam. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.
9. Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams are not permissible.
10. The cofferdam must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the cofferdam cannot be completed from shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.
11. If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.
12. During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymers systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must

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be identified in the plan. Discharge water is considered clean if it does not result in a visually identifiable degradation of water clarity.

13. The portion of the side slope that is above the observed water elevation shall be stabilized as specified in the plans prior to accepting flows. The substrate and toe of slope that has been disturbed due to construction activities shall be restored to proposed or pre-construction conditions and fully stabilized prior to accepting flows.

Please note that IEPA has issued Section 401 Water Quality Certification for this NWP. The conditions of this WQC are automatically conditions of this NWP verification and are included in the enclosed Fact Sheet. If you have any questions regarding Section 401 certification, please contact IEPA's Division of Water Pollution Control, Permit Section #15, by telephone at (217) 785-6939.

This verification is valid until March 14, 2026, when NWP 14 is scheduled to be modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date the NWP is modified, reissued, or revoked, you will have 12 months from the date of the modification, reissuance, or revocation to complete the activity under the present terms and conditions. Failure to comply with the general and regional conditions of this NWP, or any project-specific special conditions of this authorization, may result in the suspension or revocation of your authorization.

Once you have completed the authorized activity, please sign and return the enclosed compliance certification as required by general condition 30. If you have any questions, please contact Patrick VerHalen of this office by telephone at (312) 846-5545, or email at patrick.j.verhalen@usace.army.mil.

Sincerely,

**Teralyn
Pompeii**
Teralyn Pompeii
Chief, Regulatory Branch

Digitally signed by
Teralyn Pompeii
Date: 2024.11.05
13:35:16 -06'00'

Enclosures

C: Illinois Department of Transportation (Vanessa Ruiz, Alycia Klunenber)

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**PERMIT COMPLIANCE
CERTIFICATION**

Permit Number: LRC-2024-00274
Permittee: Jose Rios
Illinois Department of Transportation
Date: November 5, 2024

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of said permit and if applicable, compensatory wetland mitigation was completed in accordance with the approved mitigation plan.¹

PERMITTEE

DATE

Within 30 days after completion of the activity authorized by this permit and any mitigation required by the permit, this certification must be signed and returned to the following address:

Email to: ChicagoRequests@usace.army.mil
Subject: Compliance Certification, LRC-2024-00274

Please note that your permitted activity is subject to compliance inspections by Corps of Engineers representatives. If you fail to comply with this permit, you may be subject to permit suspension, modification, or revocation.

¹ If compensatory mitigation was required as part of your authorization, you are certifying that the mitigation area has been graded and planted in accordance with the approved plan. You are acknowledging that the maintenance and monitoring period will begin after a site inspection by a Corps of Engineers representative or after thirty days of the Corps' receipt of this certification. You agree to comply with all permit terms and conditions, including additional reporting requirements, for the duration of the maintenance and monitoring period.

NATIONWIDE PERMIT SUMMARY



U.S. Army Corps of
Engineers
Chicago District

Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide
Permits – February 25, 2022
Illinois

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, driveways, 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 of dredged or fill material 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)(4) 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).

A. Regional Conditions

- ☐ 1. For NWP 12, NWP 57, and NWP 58, pre-construction notification is required in accordance with General Condition 32 for the following activities:
 - ☐ (a) activities that involve mechanized land clearing in a forested wetland for the utility line right-of-way;
 - ☐ (b) utility lines placed within, and parallel to or along a jurisdictional stream bed.
- ☐ 2. For Nationwide Permit 14, all proposed projects that result in the loss of greater than 300 linear feet of streambed located within Waters of the U.S., requires a Pre-Construction Notice in accordance with General Condition No. 32.
- ☐ 3. 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.

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B. Nationwide Permit General Conditions

Note: 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 structures must be removed, to the maximum extent practicable, after their use has been discontinued. 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. Permittees 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 activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

☐ 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 consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably

certain to occur" and "consequences caused by the proposed action."

☐ (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). 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 species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, 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 species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) 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. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) 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 species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference 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 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 that an action authorized by NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects 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) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places 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 (see 33 CFR 330.4(g)(1)). 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 commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or 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.

- ☐ (d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has 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. 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.** Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by NWP, they must immediately notify the district engineer of what they 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, 52, 57, and 58 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 by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines 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) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-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.

This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-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. 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\(e\)\(3\)](#)).

☐ (c) 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. If restoring riparian areas involves planting vegetation, only native species should be planted. 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 needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

☐ (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.**

☐ (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see [33 CFR 330.4\(c\)](#)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

☐ (b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

☐ (c) The district engineer or certifying authority 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)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by NWP. 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 CWA 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 authorized, subject to the following restrictions:

☐ (a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot 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.

☐ (b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 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(l)(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 review by, or 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 and/or review is not authorized by NWP until the appropriate Corps office issues the section 408 permission or completes its review 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. 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) (i) 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.
- ☐ (ii) For linear projects where one or more single and complete crossings require pre-construction notification, 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 (including those single and complete crossings authorized by NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.
- ☐ (iii) 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, perennial, and intermittent, 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 or 3/100-acre of stream bed 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 species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) 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 NWP activity that requires permission from, or review by, 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, or review by, the Corps office having jurisdiction over that USACE project.
- ☐ (c) **Form of Pre-Construction Notification.** The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. 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 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
 - (iii) 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 wait an additional 15 calendar days before making a decision on the pre-construction notification. 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 NWPs, including the need for mitigation to ensure that 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 pre-construction notifications to expedite agency coordination.

C. 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 single and complete crossings of waters of the United States that require PCNs 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 of waters of the United States authorized by NWP.

If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, 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.

□ 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 or 3/100-acre of stream bed, 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. 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 that 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), 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.

D. 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 31).

E. 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.

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.

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. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation 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. 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 NWP, 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: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

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 may be 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.

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 channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. 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 “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\(c\)\(2\)](#)).

IEPA 401 CERTIFICATION



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

Corrected Copy

October 8, 2021

Corrected Copy Date: DEC 21 2021

U.S. Army Corps of Engineers, Rock Island
ATTN: Ms. Samantha Chavez, Regulatory Branch
Post Office Box 2004
Clock Tower Building
Rock Island, IL 61204-2004

Re: Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify
Nationwide Permits, September 15, 2020
CWA §401 Certification/Denial and applicable conditions
Illinois EPA Log no. C-0210-20

Dear Ms. Chavez:

On September 15, 2020 the Corps of Engineers issued the notice of proposed rulemaking concerning their determination to reissue and modify the current Nationwide Permits (NWP) that are set to expire on March 18, 2022. By letter dated August 19, 2021 your office extended the reasonable period of time to revise the §401 water quality certification to October 13, 2021 for thirty-two (32) NWPs. The Agency has made modifications to the certification conditions issued on December 11, 2020. By this final determination document the Illinois EPA grants §401 water quality certification for NWPs 3, 4, 5, 6, 7, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 25, 27, 30, 31, 32, 33, 36, 37, 38, 41, 45, 53, and 54 with the special and/or general conditions specified below. This document also provides the certification conditions for NWPs 12, 29, 39, 40, 42, 43, 51, 52, 57, and 58 and notice of the Agency determination to deny eight (8) of the proposed nationwide permits which are provided below with reasons in accordance with 40 CFR 121.7(e)(2).

CWA §401 certification is hereby granted, subject to General Conditions 1 through 12 below, for the following nationwide permits:

NWP 3 – Maintenance
NWP 4 – Fish and Wildlife Harvesting, Enhancement, and Attraction Device and Activities
NWP 5 – Scientific Measurement Devices
NWP 7 – Outfall Structures and Associated Intake Structures
NWP 18 – Minor Discharges
NWP 19 – Minor Dredging
NWP 20 – Response Operations for Oil or Hazardous Substances
NWP 22 – Removal of Vessels
NWP 25 – Structural Discharges
NWP 30 – Moist Soil Management for Wildlife
NWP 31 – Maintenance of Existing Flood Control Facilities
NWP 33 – Temporary Construction, Access and Dewatering
NWP 36 – Boat Ramps
NWP 41 – Reshaping Existing Drainage Ditches
NWP 45 – Repair of Uplands Damaged by Discrete Events

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4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

PLEASE PRINT ON RECYCLED PAPER

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CWA §401 certification is hereby granted, subject to General Conditions 1 through 12 below and the Special Conditions which are contained in the referenced attachment for the following identified nationwide permits:

NWP 6 – Survey Activities. Refer to Special Conditions for NWP 6 in Attachment.
NWP 12 – Oil or Natural Gas Pipeline Activities. Refer to Special Conditions for NWP 12 in Attachment.
NWP 13 – Bank Stabilization. Refer to Special Conditions for NWP 13 in Attachment.
NWP 14 – Linear Transportation Projects. Refer to Special Conditions for NWP 14 in Attachment.
NWP 15 – U.S. Coast Guard Approved Bridges. Refer to Special Conditions for NWP 15 in Attachment.
NWP 16 – Return Water from Upland Contained Disposal Areas. Refer to Special Conditions for NWP 16 in Attachment.
NWP 17 – Hydropower Projects. Refer to Special Conditions for NWP 17 in Attachment.
NWP 23 – Approved Categorical Exclusions. Refer to Special Conditions for NWP 23 in Attachment.
NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities. Refer to Special Conditions for NWP 27 in Attachment.
NWP 29 – Residential Developments. Refer to Special Conditions for NWP 29 in Attachment.
NWP 32 – Completed Enforcement Actions. Refer to Special Conditions for NWP 32 in Attachment.
NWP 37 – Emergency Watershed Protection and Rehabilitation. Refer to Special Conditions for NWP 37 in Attachment.
NWP 38 – Cleanup of Hazardous and Toxic Waste. Refer to Special Conditions for NWP 38 in Attachment.
NWP 39 – Commercial and Institutional Developments. Refer to Special Conditions for NWP 39 in Attachment.
NWP 40 – Agricultural Activities. Refer to Special Conditions for NWP 40 in Attachment.
NWP 42 – Recreational Facilities. Refer to Special Conditions for NWP 42 in Attachment.
NWP 43 – Stormwater Management Facilities. Refer to Special Conditions for NWP 43 in Attachment.
NWP 51 – Land-Based Renewable Energy Generation Facilities. Refer to Special Conditions for NWP 51 in Attachment.
NWP 52 – Water-Based Renewable Energy Generation Pilot Projects. Refer to Special Conditions for NWP 52 in Attachment.
NWP 53 – Removal of Low-Head Dams. Refer to Special Conditions for NWP 53 in Attachment.
NWP 54 – Living Shorelines. Refer to Special Conditions for NWP 54 in Attachment.
NWP 57 – Electric Utility Line and Telecommunications Activities. Refer to Special Conditions for NWP 12 in Attachment.
NWP 58 – Utility Line Activities for Water and Other Substances. Refer to Special Conditions for NWP 12 in Attachment.

CWA §401 certification is hereby denied with reasons provided in accordance with 401 CFR 121.7 for the following NWPs:

NWP 21 – Surface Coal Mining Activities. The Illinois EPA has determined that a case-specific review is warranted for all surface mining activities including carbon extraction because pursuant to 35 Ill. Admin. Code Section 401.102, mining activities are identified as having, when certain refuse materials are used, the capability to cause or threaten to cause a nuisance or render waters harmful or detrimental to public health and to all legitimate uses including but not limited to livestock and wildlife uses. The likelihood that contaminants related to coal extraction, particularly acid producing minerals in mine refuse, would be found within overburden and soil stockpiles and therefore present within fill materials warrant a facility specific antidegradation assessment pursuant to 35 Ill. Admin. Code Section 302.105. Additionally, Illinois' Section 401 implementation rules at 35 Ill. Admin. Code Part 395 regarding material testing exemptions specifically exclude material with known sources of pollution. Therefore, Section 401 certification is denied for this nationwide permit (NWP21).

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NWP 34 – Cranberry Production Activities: The Illinois EPA has determined that the area of impact that is allowed by an authorization under this nationwide permit exceeds 1/2 acre. 1/2 acre is determined to be representative of the maximum threshold for minimal degradation of existing uses of aquatic resources. Consequently, any activity authorized under this nationwide permit must be subject to a case-specific antidegradation assessment pursuant to 35 Ill. Admin. Code Section 302.105. Therefore, the Illinois EPA denies 401 certification for NWP 34.

NWP 44 – Mining Activities: The Illinois EPA has determined that a case-specific review is warranted for all surface mining activities because pursuant to 35 Ill. Admin. Code Section 401.102, mining activities are identified as having, when certain refuse materials are used, the capability to cause or threaten to cause a nuisance or render waters harmful or detrimental to public health and to all legitimate uses including but not limited to livestock and wildlife uses. Furthermore, all mining activities are regulated by the Illinois EPA under federal and state statute because of their potential to cause or threaten to cause water pollution. Therefore, for the above reasons, the Illinois EPA denies 401 certification for NWP 44.

NWP 46 – Discharges into Ditches: The Illinois EPA has determined that a case-specific review is warranted for all discharge activities into ditches because of the nationwide permit exceeds the 1/2 acreage determined to be the maximum threshold for minimal degradation of existing uses of aquatic resources. Consequently, any activity authorized under this nationwide permit must be subject to a case-specific antidegradation assessment pursuant to 35 Ill. Admin. Code Section 302.105. Therefore, the Illinois EPA denies 401 certification for NWP 46.

NWP 48 – Commercial Shellfish Mariculture Activities: As proposed, the Illinois EPA believes this nationwide permit is inapplicable to waters of the U.S. that are found within the State of Illinois. Therefore, the Illinois EPA denies 401 certification for NWP 48.

NWP 49 – Coal Remining Activities: By reference to the certification denial explanation for NWP 21, the Illinois EPA denies 401 certification for NWP 49.

NWP 50 – Underground Coal Mining: By reference to the certification denial explanation for NWP 21, the Illinois EPA denies 401 certification for NWP 50.

NWP 59 – Water Reclamation and Reuse Facilities: As proposed in the Federal Register, this proposed nationwide permit would appear to allow utilization of existing natural waterbodies as treatment devices. According to 35 Ill. Admin. Code 301.440 such utilization is not permissible. Therefore, the Illinois EPA denies 401 certification for NWP 59.

401 Certification General Conditions

General Conditions 1 through 12 shall be applicable to all NWPs that are granted 401 certification.

General Condition 1: Waterbodies that Require Individual Certification

Pursuant to 35 Ill. Adm. Code Section 302.105(d)(6), an individual 401 water quality certification will be required for activities permitted under these Nationwide Permits for discharges to waters designated by the State of Illinois as waters of particular biological significance or Outstanding Resource Waters under 35 Ill. Adm. Code 302.105(b). Biologically Significant Streams (BSS) are cataloged in Illinois DNR's publication

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“Integrating Multiple Taxa in a Biological Stream Rating System” and may be identified at:
<https://www2.illinois.gov/dnr/conservation/BiologicalStreamratings/Pages/default.aspx>.

General Condition 2: Water Quality Impairments

Pursuant to 35 Ill. Adm. Code Sections 302.105(a), 302.105(c)(2)(B), and 395.401(a), an individual 401 water quality certification will be required for activities permitted under these Nationwide Permits that may cause a discharge that, whether temporarily or permanently, may cause or contribute to additional loading of any pollutant, or deterioration of any water quality parameter, such as pH or dissolved oxygen, where such pollutant or parameter is also designated by the State of Illinois as a cause of water quality impairment of the particular segment of the receiving water body according to the Illinois Environmental Protection Agency's Section 303(d) list. The most recent Illinois Integrated Water Quality Report and Section 303(d) List can be found at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/303d-list.aspx>.

General Condition 3: Threatened and Endangered Species

Pursuant to 35 Ill. Admin. Code Section 302.105(f)(1)(F), prior to proceeding with any work in furtherance of activities permitted under these Nationwide Permits, potential impacts to State threatened or endangered species and Natural Areas shall be determined in accordance with applicable consultation procedures established under 17 Ill. Admin Code Part 1075. The Department of Natural Resources (IDNR) Ecological Compliance Assessment Tool (EcoCAT) is available to complete consultation at <http://dnr.illinois.gov/EcoPublic/>. If IDNR determines that adverse impacts to protected natural resources are likely, the applicant shall address those identified concerns with IDNR through the consultation process. Please contact IDNR, Impact Assessment Section at 217-785-5500 if you have any questions regarding consultation.

General Condition 4: TMDLs

Pursuant to 35 Ill. Admin. Code Sections 302.105(a), 302.105(c)(2)(B), and 395.401(a), activities permitted under these Nationwide Permits that may cause a discharge that, whether temporarily or permanently, may cause or contribute to additional loading of any pollutant, or deterioration of any water quality parameter, such as pH or dissolved oxygen, where such pollutant or parameter is addressed by a USEPA approved Total Maximum Daily Load (TMDL) report for the receiving water body shall develop and implement additional measures and or procedures which ensure consistency with the load allocations, assumptions and requirements of the TMDL report. TMDL program information and water listings are available at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/reports.aspx>.

General Condition 5: Prohibitions

Pursuant to 35 Ill. Admin. Code Section 395.401(a), the applicant shall not cause:

- violation of applicable provisions of the Illinois Environmental Protection Act;
- water pollution defined and prohibited by the Illinois Environmental Protection Act;
- violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
- interference with water use practices near public recreation areas or water supply intakes.

General Condition 6: Erosion and Sedimentation Control Measures

Pursuant to the Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)] and 35 Ill. Admin. Code Sections 302.203 and 395.402(b)(2), the applicant shall implement all necessary sedimentation and erosion control measures consistent with the current edition of

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the “Illinois Urban Manual” found at <https://illinoisurbanmanual.org/>. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins, silt fencing and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. All areas affected by construction shall be seeded and stabilized as soon after construction as possible.

General Condition 7: NPDES Stormwater Construction Permit

Pursuant to the Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)] and 35 Ill. Admin. Code Section 395.402(b)(2), the applicant 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 applied for at <https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/construction.aspx>.

General Condition 8: Spill Response Plan

Pursuant to 35 Ill. Admin. Code Sections 395.401, 302.203, and 302.208, the applicant shall ensure that a spill avoidance and response plan has been developed and implemented for management of accidental releases of petroleum, oil, and lubricant products to the aquatic environment during construction and for emergency notification of applicable downstream water supply operators. Absorbent pads, containment booms and skimmers shall be available to facilitate the cleanup of petroleum spills. If floating hydrocarbon (oil and gas) products are observed, the applicant or his designated individual will be responsible for directing that work be halted so that appropriate corrective measures are taken in accordance with the plan prior to resuming work.

General Condition 9: Hydraulic Machinery

Pursuant to 35 Ill. Admin. Code Sections 302.203, 302.304, and 302.515, all hydraulic machinery utilized for the permitted activity and used in or immediately adjacent to waters of the State shall utilize biodegradable or bio-based hydraulic fluids to minimize pollution in the case of broken or leaking hydraulic equipment.

General Condition 10: Temporary Structures and Work

Pursuant to 35 Ill. Admin. Code Sections 302.203, 395.204, and 395.401(b), temporary work pads, cofferdams, access roads and other temporary fills are approved provided that such activities are constructed with 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. Temporary fills within streams, creeks or rivers shall utilize adequate bypass measures (i.e. dam and pump, flumes, culverts, etc.) to minimize sedimentation and erosion and to maintain normal stream flow during construction.

General Condition 11: Construction Site Dewatering

Pursuant to Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)] and 35 Ill. Admin. Code Section 395.402(b)(2), dewatering of a construction site is authorized provided the dewatering activity is limited to the immediate work area within a cofferdam or otherwise isolated from waters of the State, and the work site is free from sources of contamination including those of natural origin. Dewatering activities shall incorporate Best Management Practices in accordance with the current edition of the “Illinois Urban Manual”

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<https://illinoisurbanmanual.org/>. Practice Standard for Dewatering (no. 813) or as otherwise appropriate to ensure that return flows from the dewatering activity are free of unnatural turbidity and floating debris and meet applicable water quality standards. Dewatering or discharge of flush water from construction of drilled piers or boreholes is not authorized and must be conducted in accordance with an NPDES permit issued by the Illinois EPA.

General Condition 12: Discharged Material Quality

Pursuant to 35 Ill. Admin. Code Sections 302.203, 302.208, and 395.401(b), any spoil material excavated, dredged or otherwise produced must not be returned to the water body but must be deposited in a self-contained area in compliance with all state statutes. Except as specifically allowed by special condition, any backfilling must be done with clean material that is predominantly sand or larger size material, with no more than 20% passing a #230 U. S. sieve and placed in a manner to prevent violation of applicable water quality standards.

401 Certification Special Conditions

Special Conditions including the conditional exclusions of 401 certification coverage that are listed within the Attachment: "Special Conditions for Illinois EPA 401 Water Quality Certifications of Certain Nationwide Permits" shall be applicable as stated therein.

Should you have any questions or comments regarding the content of this nationwide certification, please contact Darren Gove at 217-782-3362.

Sincerely,

ORIGINAL SIGNED

Darin E. LeCrone, P.E.
Manager, Permit Section
Division of Water Pollution Control

DEL:DRG:C-0210-20.docx

Attachment: Special Conditions for Illinois EPA 401 Water Quality Certifications of Certain Nationwide Permits Regarding Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify Nationwide Permits dated September 15, 2020

cc: Records Unit
CoE, Chicago District
CoE, Louisville District (Indianapolis Office)
CoE, Louisville District (Newburgh Regulatory Office)
CoE, Memphis District
CoE, St. Louis District
IDNR, Bartlett
IDNR, OWR, Chicago
IDNR, OWR, Springfield
USEPA, Region 5
USFWS, Rock Island, Barrington and Marion

IEPA Log No. C-0210-20: Attachment: Special Conditions for Illinois EPA 401 Water Quality Certifications of Certain Nationwide Permits Regarding Federal Register [Docket Number: COE-2020-0002] Proposal to Reissue and Modify Nationwide Permits dated September 15, 2020

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**ILLINOIS EPA WATER QUALITY CERTIFICATION
SPECIAL CONDITIONS FOR NATIONWIDE PERMIT 14
Linear Transportation Projects**

1. Pursuant to 35 Ill. Admin. Code Sections 395.401(a), 302.105(a), and 302.105(c)(2)(B), a case-specific (individual) 401 water quality certification from the Illinois EPA will be required for linear transportation activities that cause loss of greater than 500 linear feet of stream channel, as measured along the stream corridor.
2. Pursuant to 35 Ill. Admin. Code Sections 395.401(a), 302.105(a), and 302.105(c)(2)(B), a case-specific (individual) 401 water quality certification from the Illinois EPA will be required for linear transportation activities covered by this nationwide permit that include the temporary or permanent placement of steel or other painted structures within the waterbody as result of demolition work of previous structures.
3. Pursuant to 35 Ill. Admin. Code Sections 395.401(a), 302.105(a), and 302.105(c)(2)(B), a case-specific (individual) 401 water quality certification from the Illinois EPA will be required for new or expanded roadways that affect waterways which are designated by the State of Illinois as having water quality impairments caused by chloride. The most recent Illinois Integrated Water Quality Report and Section 303(d) List can be found at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/303d-list.aspx>
4. Pursuant to 35 Ill. Admin. Code Sections 302.203 and 395.401(b), any relocated stream channel authorized under this nationwide permit shall be constructed under dry conditions and allowed to fully stabilize prior to the diversion of flow to prevent erosion and sedimentation.

SWPPP



Contractor Certification Statement

Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Part IX. Contractor Required Submittals of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	Marked Route	Section Number
FAP 559	IL 58 (Golf Rd)	2021-060-SW-TS&N
Project Number	County	Contract Number
HSIP-UCZX(187)	Cook	62N97

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Additionally, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

- ☐ Contractor
☐ Sub-Contractor

Signature	Date		
Print Name	Title		
Name of Firm	Phone		
Street Address	City	State	Zip Code

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP

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Storm Water Pollution Prevention Plan

Route	Marked Route	Section Number
FAP 559	IL 58 (Golf Rd)	2021-060-SW-TS&N
Project Number	County	Contract Number
HSIP-UCZX(187)	Cook	62N97

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

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

Permittee Signature & Date

SWPPP Notes

Preparing BDE 2342 (Storm Water Pollution Prevention Plan)

Guidance on preparing each section of BDE 2342 (Storm Water Pollution Prevention Plan) is found in Chapter 41 of the IDOT Bureau of Design and Environment (BDE) Manual, please consult this chapter during SWPPP preparation. Please note that the Illinois Environmental Protection Agency (IEPA) has 30 days to review the Notice of Intent (NOI) prior to project approval and any deficiencies can result in construction delays.

The Notice of Intent contains the following documents:

- BDE 2342 (Storm Water Pollution Prevention Plan)
- BDE 2342 A (Contractor Certification Statement)
- Erosion and Sediment Control Plan (See Section 63-4.09 of the BDE Manual)

Non-applicable information

If any section of the SWPPP is not applicable put "N/A" in box rather than leaving blank.

National Pollutant Discharge Elimination System (NPDES) Compliance

Description of Work: This work shall consist of those efforts necessary for compliance with the requirements of the Clean Water Act, Section 402 (NPDES), and the Illinois Environment Protection Act. This provision also provides the background information needed to comply with ILR10 and ILR40 permits for this project.

NPDES COMPLIANCE REQUIREMENTS

Part I: Site Description

1. Describe the project location; include latitude and longitude, section, town, and range.

The project is located at the intersection of IL 58 at Barrington Road in the Village of Hoffman Estates, Cook County, Illinois. 42°02'47.4"N 88°08'40.56"W, Section 12, 13,7 , & 18 Township 41N Range 9E & 10E.

The design, installation, and maintenance of BMPs at these locations are within District One, an area where annual erosivity (R value) is less than or equal to 160. Erosivity is less than 5 in all two-week periods between October 12 and April 15, which would qualify for a construction rainfall erosivity waiver under the US Construction General Permit requirements. At these locations, erosivity is highest in spring, summer, and autumn, April 16 - October 11.

2. Describe the nature of the construction activity or demolition work.

The project will be completed in 4 stages with substages. The project consists of intersection channelization, widening, traffic signal modernization, and ADA improvements at the intersection of IL 58 & Barrington Road, including installing storm sewer, culvert extension, and regrading roadside swales/ditches. This project will be permanently stabilized by stage with Class 2A, Class 4, & Class 5 Seeding, and Sodding Salt Tolerant. The project also includes the installation, maintenance, and removal of ESC measures.

3. Describe the intended sequence of major activities which disturb soils for major portions of the site (e.g. clearing, grubbing, excavation, grading, on-site or off-site stockpiling of soils, on-site or off-site storage of materials).

Erosion control plans and notes are provided for the protection of loose, excavated material. Temporary erosion control measures for earth stockpiles include use of perimeter erosion barrier, temporary erosion control seeding, or application of mulch. Permanent erosion control measures are provided for final grading, including seeding and erosion control blanket. For in-stream work at the culvert, the contractor shall submit an in-stream work plan to the Department for approval.

4. The total area of the construction site is estimated to be 8.24 acres.

5. The total area of the site estimated to be disturbed by excavation, grading or other activities is 8.24 acres.

6. Determine an estimate of the runoff coefficient of the site after construction activities are completed.

C = 0.76 (Proposed); C = 0.70 (Existing)
Impervious area = 6.34 acres (Proposed); 5.44 (Existing)
Pervious area = 1.90 acres (Proposed); 2.8 (Existing)
Assume C = 0.9 (Impervious); C = 0.3 (Pervious)

7. Provide the existing information describing the potential erosivity of the soil at discharge locations at the project site.

There are 5 open discharge locations within the project:

1. North ditch, West leg: 290B. The ditch slope at outlet is 0.33%, which is lower than the general slopes found with this type of soil. This location is at minimal concern for erosion due to gravity.
2. South ditch, West leg: 290B. The ditch slope at outlet is 0.48%, which is lower than the general slopes found with this type of soil. This location is at minimal concern for erosion due to gravity.
3. Culvert outlet: 531C2. The box culvert slope is around 3.0%. The surveyed slopes are around the 4% to 6% as listed in the soil description below. The soil is already eroded, and at moderate concern for further erosion.
4. North ditch, East leg: 318C2. The ditch slope at outlet is approximately 1%, which is lower than the general slopes found with this type of soil. The ditch carries a minimal amount of runoff from the adjacent pavement, as much of the runoff flows offsite at the box culvert a few hundred feet to the east. This location is at minimal concern for erosion due to gravity.
5. South swale, East leg: 443B. The swale slope at outlet is approximately 0.7%, which is lower than the general slopes found with this type of soil. The backslope of the swale is very shallow, meaning flow concentrated at the bottom of the roadway foreslope will be spread out and shallow. This location is at minimal concern for erosion due to gravity.

Soil descriptions provided below.

Stormwater is also carried offsite within enclosed storm sewer to the North project limit.

8. Erosion and Sediment Control Plan (Graphic Plan) is included in the contract. ☒ Yes ☐ No

9. List all soils found within project boundaries; include map until name, slope information, and erosivity.

223C2 Varna silt loam, 4 to 6 percent slopes, eroded. Moderate erosivity. K Factor = 0.37

232A Ashkum silty clay loam, 0 to 2 percent slopes. Slight erosivity. K Factor = 0.2

290B Warsaw silt loam, 2 to 4 percent slopes. Moderate erosivity. K Factor = 0.32

318C2 Lorenzo loam, 4 to 6 percent slopes, eroded. Moderate erosivity. K Factor = 0.28

329A Will silty clay loam, 0 to 2 percent slopes. Slight erosivity. K Factor = 0.28

443B Barrington silt loam, 2 to 4 percent slopes. Moderate erosivity. K Factor = 0.28

530D2 Ozaukee silt loam, 6 to 12 percent slopes, eroded. Severe erosivity. K Factor = 0.43

530D3 Ozaukee silty clay loam, 6 to 12 percent slopes, severely eroded. Severe erosivity. K Factor = 0.37

531C2 Markham silt loam, 4 to 6 percent slopes, eroded. Moderate erosivity. K Factor = 0.37

802B Orthents, loamy, undulating. Moderate erosivity. K Factor = 0.37

3107A Sawmill silty clay loam, heavy till plain, 0 to 2 percent slopes, frequently flooded. Slight erosivity. K Factor = 0.28

10. List of all MS4 permittees in the area of this project

Hanover Township, Schaumburg Township, Hoffman Estates Village, Schaumburg Village

Note: For sites discharging to an MS4, a separate map identifying the location of the construction site and the location where the MS4 discharges to surface water must be included.

Part II: Waters of the US

1. List the nearest named receiving water(s) and ultimate receiving waters.

The runoff from this site drains from proposed storm sewer, culverts, and ditches to the Poplar Creek floodplain. This project does not impact a biologically significant stream.

2. Are wetlands present in the project area? ☒ Yes ☐ No

If yes, describe the areal extent of the wetland acreage at the site.

WOUS 1 (unnamed ephemeral tributary to Poplar Creek): 0.079 acres; 0.033 acres of impact

Wetland 1: 0.124 acres; 0.008 acres of impact

Wetland 2: 0.078 acres; No Impact

Wetland 3: 0.138 acres; 0.075 acres of impact

Wetland 4: 0.018 acres; No Impact

3. Natural buffers:

For any storm water discharges from construction activities within 50 feet of a Waters of the United States, except for activities for water-dependent structures authorized by a Section 404 permit, the following shall apply:

(i) A 50-foot undisturbed natural buffer between the construction activity and the Waters of the United States has been provided

☐ Yes ☒ No; and/or

(ii) Additional erosion and sediment controls within that area has been provided

☒ Yes ☐ No; and Describe: Perimeter erosion barrier and rolled ditch checks to be provided

Part III. Water Quality

1. Water Quality Standards

As determined by the Illinois Pollution Control Board, Illinois waters have defined numeric limits of pollutants under the umbrella term "Water Quality Standards." In the following table are commonly used chemicals/practices used on a construction site. These chemicals if spilled into a waterway, could potentially contribute to a violation of a Water Quality Standard. If other chemicals that could contribute a violation of a Water Quality Standard, add as needed.

- | | |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Fertilizer (check as appropriate) | <input type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Nitrogen | <input checked="" type="checkbox"/> Waste water for concrete washout station |
| <input checked="" type="checkbox"/> Phosphorus, and/or | <input type="checkbox"/> Coal tar Pitch Emulsion |
| <input checked="" type="checkbox"/> Potassium | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Herbicide | <input type="checkbox"/> Other (Specify) _____ |

Table 1: Common chemicals/potential pollutants used during construction

If no boxes are checked in Table 1 above, check the following box:

☒ There are no chemicals on site that will exceed a Water Quality Standards if spilled.

If any boxes are checked in Table 1 above, check the following box:

There are chemicals on site that if spilled could potentially cause an exceedance of a Water Quality Standard. The Department shall implement Pollution Prevention/Good Housekeeping Practices as described in the Department's ILR40 Discharge for Small Municipal Separate Storm Sewer Systems (MS4) reiterated below and Part VIII. Unexpected Regulated Substances/Chemical Spill Procedures:

Pollution Prevention:

The Department will design, and the contractor shall, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants from construction activities. At a minimum, such measures must be designed, installed, implemented and maintained to:

- (a) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
- (b) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, chemical storage tanks, deicing material storage facilities and temporary stockpiles, detergents, sanitary waste, and other materials present on the site exposed to precipitation and to storm water.
- (c) Minimize the discharge of pollutants from spills, leaks and vehicle and equipment maintenance and repair activities and implement chemical spill and leak prevention and response procedures;
- (d) Minimize the exposure of fuel, oil, hydraulic fluids, other petroleum products, and other chemicals by storing in covered areas or containment areas. Any chemical container with a storage of 55 gallons or more must be stored a minimum of 50 feet from receiving waters, constructed or natural site drainage features, and storm drain inlets. If infeasible due to site constraints, store containers as far away as the site permits and document in your SWPPP the specific reasons why the 50-foot setback is infeasible and how the containers will be stored.
- (e) The contractor is to provide regular inspection of their construction activities and Best Management Practices (BMPs). Based on inspection findings, the contractor shall determine if repair, replacement, or maintenance measures are necessary in order to ensure the structural integrity, proper function, and treatment effectiveness of structural storm water BMPs. Necessary maintenance shall be completed as soon as conditions allow to prevent or reduce the discharge of pollutants to storm water or as ordered by the Engineer. The Engineer shall conduct inspections required in Section XI Inspections, and report to the contractor deficiencies noted. These Department conducted inspections do not relieve the contractor from their responsibility to inspect their operations and perform timely maintenance; and
- (f) In addition, all IDOT projects are screened for Regulated Substances as described in Section 27-3 of the BDE Manual and implemented via Section 669: Removal and Disposal of Regulated substances in the Standard Specifications for Road and Bridge Construction.

Approved alterations to the Department's provided SWPPP, including those necessary to protect Contractor Borrow, Use and Waste areas, shall be designed, installed, implemented and maintained by the Contractor in accordance with IDOT Standard Specifications Section 280.

2. 303(d) Impaired Waterways

Does the project area have any 303(d) impaired waterways with the following impairments?

- suspended solids
- turbidity, and or
- siltation

☐ Yes ☒ No

If yes, list the name(s) of the listed water body and the impairment(s)

303(d) waterbody	Impairments(s)
N/A	

In addition, It is paramount that the project does not increase the level of the impairment(s) described above. Discuss which BMPs will be implemented to reduce the risk of impairment increase

N/A

3. Total Maximum Daily Load (TMDL)

Does the project include any receiving waters with a TMDL for sediment, total suspended solids, turbidity or siltation? ☐ Yes ☒ No

If yes, List TMDL waterbodies below and describe associated TMDL

TMDL waterbody	TMDL
----------------	------

TMDL waterbody	TMDL
N/A	

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

N/A

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

N/A

Part IV. Temporary Erosion and Sediment Controls

Stabilization efforts must be initiated within 1 working day of cessation of construction activity and completed within 14 days. Areas must be stabilized if they will not be disturbed for at least 14 calendar days. Exceptions to this time frame include:

- (i) Where the initiation of stabilization measures is precluded by snow cover, stabilization measures must be initiated as soon as practicable,
- (ii) On areas where construction activities have temporarily ceased and will resume after 14 days, a temporary stabilization method can be used (temporary stabilization techniques must be described), and
- (iii) Stabilization is not required for exit points at linear utility construction site that are used only episodically and for very short durations over the life of the project, provided other exit point controls are implemented to minimize sediment track-out.

Additionally, a record must be kept with the SWPPP throughout construction of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated.

At a minimum, controls must be coordinated, installed and maintained to:

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

Note: For practices below, consult relevant design criteria in Chapter 41 of the BDE Manual and maintenance criteria in Erosion and Sediment Control Field Guide for Construction.

1. Erosion Control:

The following are erosion control practices which may be used on a project (place a check by each practice that will be utilized on the project, add additional practices as needed):

- | | |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Mulch | <input type="checkbox"/> Preservation of existing vegetation |
| <input checked="" type="checkbox"/> Erosion Control Blanket | <input type="checkbox"/> Temporary Turf Cover Mixture (Class 7) |
| <input type="checkbox"/> Turf Reinforcement Mat | <input checked="" type="checkbox"/> Permanent seeding (Class 1-6) |
| <input checked="" type="checkbox"/> Sodding | <input checked="" type="checkbox"/> Other (Specify) <u>Temporary Mulching</u> |
| <input type="checkbox"/> Geotextile fabric | <input checked="" type="checkbox"/> Other (Specify) <u>Temporary Erosion Control Seeding</u> |
| | <input type="checkbox"/> Other (Specify) _____ |

2. Sediment Control:

The following sediment control devices will be implemented on this project:

- | | |
|----------------------------------------------------|---------------------------------------------------------------|
| <input checked="" type="checkbox"/> Ditch Checks | <input checked="" type="checkbox"/> Perimeter Erosion Barrier |
| <input type="checkbox"/> Inlet and Pipe protection | <input checked="" type="checkbox"/> Rolled Excelsior |
| <input type="checkbox"/> Hay or Straw bales | <input type="checkbox"/> Silt Filter Fence |

- ☐ Above grade inlet filters (fitted)
☒ Above grade inlet filters (non-fitted)
☒ Inlet filters

- ☐ Urethane foam/geotextiles
☐ Other (Specify) _____
☐ Other (Specify) _____
☐ Other (Specify) _____

3. Structural Practices:

Provide below is a description of structural practices that will be implemented:

- | | |
|---------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Aggregate Ditch | <input checked="" type="checkbox"/> Stabilized Construction Exits |
| <input type="checkbox"/> Articulated Block Revetment Mat | <input checked="" type="checkbox"/> Stabilized Trench Flow |
| <input type="checkbox"/> Barrier (Permanent) | <input type="checkbox"/> Sediment Basin |
| <input type="checkbox"/> Concrete Revetment Mats | <input type="checkbox"/> Retaining Walls |
| <input checked="" type="checkbox"/> Dewatering Filtering | <input checked="" type="checkbox"/> Riprap |
| <input type="checkbox"/> Gabions | <input type="checkbox"/> Storm Drain Inlet Protection |
| <input checked="" type="checkbox"/> In-Stream or Wetland Work | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Level Spreaders | <input type="checkbox"/> Sediment Trap |
| <input type="checkbox"/> Paved Ditch | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Precast Block Revetment Mat | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Rock Outlet Protection | <input type="checkbox"/> Other (Specify) _____ |

4. Polymer Flocculants

Design guidance for polymer flocculants is available in Chapter 41 of the BDE Manual. In addition, Polymer Flocculants may only be used by district Special Provision.

If polymer flocculants are used for this project, the following must be adhered to and described below:

- Identify the use of all polymer flocculants at the site.
- Dosage of treatment chemicals shall be identified along with any information from any Material Safety Data Sheet.
- Describe the location of all storage areas for chemicals.
- Include any information from the manufacturer's specifications.
- Treatment chemicals must be stored in areas where they will not be exposed to precipitation.
- The SWPPP must describe procedures for use of treatment chemicals and staff responsible for use/application of treatment chemicals must be trained on the established procedures.

N/A

Part V. Other Conditions

1. Dewatering

Will dewatering be required for this project? ☒ Yes ☐ No

If yes, the following applies:

- Dewatering discharges shall be routed through a sediment control (e.g., sediment trap or basin, pumped water filter bag) designed to minimize discharges with visual turbidity;
- The discharge shall not include visible floating solids or foam;
- The discharge must not cause the formation of a visible sheen on the water surface, or visible oily deposits on the bottom or shoreline of the receiving water. An oil-water separator or suitable filtration device shall be used to treat oil, grease, or other similar products if dewatering water is found to or expected to contain these materials;
- To the extent feasible, use well-vegetated (e.g., grassy or wooded), upland areas of the site to infiltrate dewatering water before discharge;
- You are prohibited from using receiving waters as part of the treatment area;
- To minimize dewatering-related erosion and related sediment discharges, use stable, erosion-resistant surfaces (e.g., well-vegetated grassy areas, clean filler stone, geotextile underlayment) to discharge from dewatering controls. Do not place dewatering controls, such as pumped water filter bags, on steep slopes (15% or greater in grade);
- Backwash water (water used to backwash/clean any filters used as part of storm water treatment) must be properly treated or hauled off-site for disposal;
- Dewatering treatment devices shall be properly maintained; and
- See Part XI (Inspections) for inspection requirement.

Part VI. Permanent (i.e., Post-Construction) Storm Water Management Controls

Provided below is a description of measures that may be installed during the construction process to control volume and therefore the amount pollutants in storm water runoff that can occur after construction operations have been completed.

Practices may include but are not limited to the following:

- Aggregate ditch checks;
- bioswales,
- detention pond(s),
- infiltration trench;
- retention pond(s),
- open vegetated swales and natural depressions,
- treatment train (sequential system which combine several practices).
- Velocity dissipation devices (See Structural Practices above)

Describe these practices below

Roadside ditches conveying stormwater from the project will be replaced 1:1. As such, per the USACE 404 Permit, further mitigation is not required. Riprap aprons at storm sewer outlets were provided for scour protection.

Part VII. Additional Practices Incorporated From Local Ordinance(s)

In some instances, an additional practice from a local ordinance may be included in the project. If so, describe below (Note: the Department is not subject to local ordinances)

N/A

Part VIII. Unexpected Regulated Substances/Chemical Spill Procedures

When Unexpected Regulated Substances or chemical spills occur, Article 107.19 of the Standard Specifications for Road and Bridge Construction shall apply. In addition, it is the contractor's responsibility to notify the Engineer in the event of a chemical spill into a ditch or waterway, the Engineer will then notify appropriate IEPA and IEMA personnel for the appropriate cleanup procedures.

Part IX. Contractor Required Submittals

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

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

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

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

- Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
- Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
- Material Delivery, Storage and Use- Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project. Specifically, any chemical stored in a 55 gallon drum provided by the contractor.
- Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
- Waste Disposal - Discuss methods of waste disposal that will be used for this project.
- Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill.
- Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
- Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
- Vehicle and Equipment Fueling - Identify equipment fueling locations for this project and what BMPs will be used to ensure

containment and spill prevention.

- Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
- Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.

Additional measures indicated in the plan

N/A

Part X. Maintenance

It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications. However, when requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Any damage or undermining shall be repaired immediately.

For Inlet Protection: Where there is evidence of sediment accumulation adjacent to the inlet protection measure, the deposited sediment must be removed by the following business day.

Below, describe procedures to maintain in good and effective operating conditions

Erosion control measures to be utilized on this project include perimeter erosion barrier, storm drain inlet protection, riprap, erosion control blanket, temporary mulching, permanent seeding, temporary erosion control seeding, and temporary ditch checks.

Perimeter erosion barrier shall be inspected periodically for rips, tears, and undermining. Any missing stakes shall be replaced immediately. Sediment shall be cleaned out and disposed of properly if it reaches one-third height of barrier.

Storm drain inlet protection shall be inspected frequently and cleaned to prevent sediment laden runoff from overflowing the device.

Preparation and placement of riprap shall be in accordance with Article 281 of the Standard Specifications for Road and Bridge Construction. Stone at riprap aprons will be replaced due to washout.

Erosion control blanket shall be inspected for erosion underneath if dislodged staples or tenting of the blanket is present. The low end of the blanket shall be inspected for sediment buildup; this indicates water is flowing underneath the blanket.

Temporary mulching shall be used for temporary stabilization during season when temporary seed will not germinate. Mulch shall be applied to ensure uniform coverage and no exposed soil.

Permanent seeding shall be provided as shown on the plans and as described in Article 250 of the Standard Specifications for Road and Bridge Construction.

Temporary erosion control seeding shall be reapplied as needed if stabilization has not been achieved. All areas to be seeded shall be seeded every seven days.

Temporary ditch checks shall be checked for sediment accumulation and cleaned when sediment reaches 50% of the height of the device. Ditch checks shall be repaired or replaced when tears, splits, unraveling, or compressed excelsior is present. Ditch checks shall be of sufficient length to establish flow over the center of the ditch check, as opposed to around the sides.

The IDOT Erosion and Sediment Control Field Guide for Construction Inspection can be found at: <https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/transportation-system/manuals-guides-and-handbooks/highways/environment/erosion-and-sediment-control-field-guide-for-construction-inspection.pdf>

Part XI. Inspections

Qualified personnel shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm or by the end of the following business or workday that is 0.50 inches or greater or equivalent snowmelt (except as allowed for Frozen Conditions).

In addition, all areas where storm water typically flows within the site should be inspected periodically to check for evidence of pollutants entering the drainage system, as well as all locations where stabilization measures have been implemented to ensure they are operating correctly.

Inspections shall be documented on the form BC 2259 (Storm Water Pollution Prevention Plan Erosion Control Inspection Report).

The Erosion and Sediment Control Field Guide for Construction Inspection shall be consulted as needed.

Dewatering

For site(s) discharging dewatering water, an inspection during the discharge shall be done once per day on which the discharge occurs and record the following in a report within 24 hours of completing the Inspection:

- The inspection date;
- Names and titles of personnel performing the inspection;
- Approximate times that the dewatering discharge began and ended on the day of inspection;
- Estimates of the rate (in gallons per day) of discharge on the day of inspection;
- Whether or not any of the following indications of pollutant discharge were observed at the point of discharge: a sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; and/or a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water.

Frozen Conditions

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

Flooding or unsafe conditions

Areas that are inaccessible during required inspections due to flooding or other unsafe conditions must be inspected within 72 hours of becoming accessible.

Part XII. Incidence of Noncompliance (ION)

The Department shall notify the appropriate Agency Field Operations Section office by email as described on the IEPA ION form, within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit.

The Department shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. Submission shall be on forms provided by the IEPA and include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. Corrective actions must be undertaken immediately to address the identified non-compliance issue(s).

Illinois EPA
2520 W. Iles Ave./P.O. Box 19276
Springfield, IL 62794-9276

Please note that if these are delivered via FedEx or UPS, these carriers cannot deliver to our P.O. Box and this number must be excluded from the mailing address.

Part XIII. Corrective Actions

Corrective actions must be taken when:

- A storm water control needs repair or replacement;
- A storm water control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly;
- Discharges are causing an exceedance of applicable water quality standards; or
- A prohibited discharge has occurred.

Corrective Actions must be completed as soon as possible and documented within 7 days in an Inspection Report or report of noncompliance. If it is infeasible to complete the installation or repair within 7 calendar days, it must be documented in the records why it is infeasible to complete the installation or repair within the 7 day time-frame and document the schedule for installing the storm water control(s) and making it operational as soon as feasible after the 7-day time-frame. In the event that maintenance is required for the same storm water control at the same location three or more times, the control must be repaired in a manner that prevents continued failure to the extent feasible, and it must be documented the condition and how it was repaired in the records. Alternatively, it must be documented why the specific re-occurrence of this same issue must continue to be addressed as a routine maintenance fix.

Part XIV. Retention of Records

The Department must retain copies of the SWPPP and all reports and notices required by this permit, records of all data used to complete the NOI to be covered by this permit, and the Agency Notice of Permit Coverage letter for at least three years from the date that the permit coverage expires or is terminated. The permittee must retain a copy of the SWPPP and any revisions to the SWPPP required by this permit at the construction site from the date of project initiation to the date of final stabilization. Any manuals or other documents referenced in the SWPPP must also be retained at the construction site.

Part XV. Failure to Comply

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the contractor (See Article 105.03 Conformity with Contract)

Part XVI. Keeping the SWPPP ("plan") Current

IDOT shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to Waters of the United States and which has not otherwise been addressed in the plan or if the plan proves to be ineffective in eliminating or significantly minimizing sediment and/or pollutants identified under paragraph Part II. Water Quality or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity.

In addition, the plan shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the plan. Amendments to the plan may be reviewed by the IEPA the same manner as the SWPPP and Erosion and Sediment Control Plan (ESCP) submitted as part of the Notice of Intent (NOI). The SWPPP and site map must be modified within 7 days for any changes to construction plans, storm water controls or other activities at the site that are no longer accurately reflected in the SWPPP.

In addition, the NOI shall be modified using the CDX system for any substantial modifications to the project such as:

- address changes
- new contractors
- area coverage
- additional discharges to Waters of the United States, or
- other substantial modifications (e.g. addition of dewatering activities).

The notice of intent shall be modified within 30 days of the modification to the project.

Part XVII: Notifications

In addition to the NOI submitted to IEPA, all MS4 permittees identified in Part I. Site Description shall receive a copy of the NOI.

Part XVIII. Notice of Termination

Where a site has completed final stabilization and all storm water discharges from construction activities that are authorized by this permit are eliminated, the permittee must submit a completed Notice of Termination (NOT) that is signed in accordance with ILR10 permit.

Method of Measurement: NPDES Compliance shall not be measured for payment separately. Measurement for payment for Temporary Erosion and Sediment Control shall be in accordance with Section 280 or as otherwise provided in the contract. Permanent BMPs necessary to comply with this provision shall be measured for payment in accordance with their respective provisions in the contract.

Basis of Payment: NPDES Compliance shall not be paid for separately. Payment for Temporary Erosion and Sediment Control shall be in accordance with Section 280 or as otherwise provided in the contract. Permanent BMPs necessary to comply with this provision shall be paid for in accordance with their respective payment provisions in the contract.

DRILLED SHAFTS

Effective: October 5, 2015

Revised: October 27, 2023

Revise Section 516 of the Standard Specifications to read:

“SECTION 516. DRILLED SHAFTS

516.01 Description. This work shall consist of constructing drilled shaft foundations.

516.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Reinforcement Bars.....	1006.10
(c) Grout (Note 2).....	1024.01
(d) Permanent Steel Casing.....	1006.05(d)
(e) Slurry (Note 3)	

Note 1. When the soil contains sulfate contaminates, ASTM C 1580 testing will be performed to assess the severity of sulfate exposure to the concrete. If the sulfate contaminate is >0.10 to < 0.20 percent by mass, a Type II (MH) cement shall be used. If the sulfate contaminate is >0.20 to < 2.0 percent by mass, a Type V cement shall be used. If the sulfate contaminate is ≥ 2.0 percent by mass, refer to ACI 201.2R for guidance.

Note 2. The sand-cement grout mix shall be according to Section 1020 and shall be two to five parts sand and one part Type I or II cement. The maximum water cement ratio shall be sufficient to provide a flowable mixture with a typical slump of 10 in. (250 mm).

Note 3. Slurry shall be bentonite, emulsified polymer, or dry polymer, and shall be approved by the Engineer.

516.03 Equipment. Equipment shall be according to the following.

Item	Article/Section
(a) Concrete Equipment	1020.03
(b) Drilling Equipment (Note 1)	
(c) Hand Vibrator	1103.17(a)
(d) Underwater Concrete Placement Equipment	1103.18

Note 1. The drilling equipment shall have adequate capacity, including power, torque and down thrust, to create a shaft excavation of the maximum diameter specified to a depth of 20 percent beyond the depths shown on the plans.

516.04 Submittals. The following information shall be submitted on form BBS 133.

- (a) Qualifications. At the time of the preconstruction conference, the Contractor shall provide the following documentation.
- (1) References. A list containing at least three projects completed within the three years prior to this project's bid date which the Contractor performing this work has installed drilled shafts of similar diameter, length, and site conditions to those shown in the plans. The list of projects shall contain names and phone numbers of owner's representatives who can verify the Contractor's participation on those projects.
 - (2) Experience. Name and experience record of the drilled shaft supervisor, responsible for all facets of the shaft installation, and the drill operator(s) who will be assigned to this project. The supervisor and operator(s) shall each have a minimum of three years experience in the construction of drilled shafts.
- (b) Installation Procedure. A detailed installation procedure shall be submitted to the Engineer for acceptance at least 28 days prior to drilled shaft construction and shall address each of the following items unless otherwise directed by the Engineer in writing.
- (1) Equipment List. List of proposed equipment to be used including cranes, drill rigs, augers, belling tools, casing, vibratory hammers, core barrels, bailing buckets, final cleaning equipment, slurry equipment, tremies, or concrete pumps, etc.
 - (2) General Sequence. Details of the overall construction operation sequence, equipment access, and the sequence of individual shaft construction within each substructure bent or footing group. The submittal shall address the Contractor's proposed time delay and/or the minimum concrete strength necessary before initiating a shaft excavation adjacent to a recently installed drilled shaft.
 - (3) Shaft Excavation. A site specific step by step description of how the Contractor anticipates the shaft excavation to be advanced based on their evaluation of the subsurface data and conditions expected to be encountered. This sequence shall note the method of casing advancement, anticipated casing lengths, tip elevations and diameters, the excavation tools used and drilled diameters created. The Contractor shall indicate whether wet or dry drilling conditions are expected and if groundwater will be sealed from the excavation.
 - (4) Slurry. When the use of slurry is proposed, details on the types of additives to be used and their manufacturers shall be provided. In addition, details covering the measurement and control of the hardness of the mixing water, agitation, circulation, de-sanding, sampling, testing, and chemical properties of the slurry shall be submitted.
 - (5) Shaft Cleaning. Method(s) and sequence proposed for the shaft cleaning operation.

- (6) Reinforcement Cage and Permanent Casing. Details of reinforcement placement including rolling spacers to be used and method to maintain proper elevation and location of the reinforcement cage within the shaft excavation during concrete placement. The method(s) of adjusting the reinforcement cage length and permanent casing if rock is encountered at an elevation other than as shown on the plans. As an option, the Contractor may perform soil borings and rock cores at the drilled shaft locations to determine the required reinforcement cage and permanent casing lengths.
- (7) Concrete Placement. Details of concrete placement including proposed operational procedures for free fall, tremie or pumping methods. The sequence and method of casing removal shall also be stated along with the top of pour elevation, and method of forming through water above streambed.
- (8) Mix Design. The proposed concrete mix design(s).
- (9) Disposal Plan. Containment and disposal plan for slurry and displaced water. Containment and disposal plan for contaminated concrete pushed out of the top of the shaft by uncontaminated concrete during concrete placement.
- (10) Access and Site Protection Plan. Details of access to the drilled shafts and safety measures proposed. This shall include a list of casing, scaffolding, work platforms, temporary walkways, railings, and other items needed to provide safe access to the drilled shafts. Provisions to protect open excavations during non-working hours shall be included.

The Engineer will evaluate the drilled shaft installation procedure and notify the Contractor of acceptance, need for additional information, or concerns with the installation's effect on the existing or proposed structure(s).

CONSTRUCTION REQUIREMENTS

516.05 General. Excavation for drilled shaft(s) shall not proceed until written authorization is received from the Engineer. The Contractor shall be responsible for verification of the dimensions and alignment of each shaft excavation as directed by the Engineer.

Unless otherwise approved in the Contractor's installation procedure, no shaft excavation, casing installation, or casing removal with a vibratory hammer shall be made within four shaft diameters center to center of a shaft with concrete that has a compressive strength less than 1500 psi (10,300 kPa). The site-specific soil strengths and installation methods selected will determine the actual required minimum spacing, if any, to address vibration and blow out concerns.

Lost tools shall not remain in the shaft excavation without the approval of the Engineer.

Blasting shall not be used as a method of shaft excavation.

516.06 Shaft Excavation Protection Methods. The construction of drilled shafts may involve the use of one or more of the following methods to support the excavation during the various phases of shaft excavation, cleaning, and concrete placement dependent on the site conditions encountered. Surface water shall not flow uncontrolled into the shaft excavation, however water may be placed into the shaft excavation in order to meet head pressure requirements according to Articles 516.06(c) and 516.13.

The following are general descriptions indicating the conditions when these methods may be used.

- (a) Dry Method. The dry construction method shall only be used at sites where the groundwater and soil conditions are suitable to permit the drilling and dewatering of the excavation without causing subsidence of adjacent ground, boiling of the base soils, squeezing, or caving of the shaft side walls. The dry method shall consist of drilling the shaft excavation, removing accumulated water, cleaning the shaft base, and placing the reinforcement cage and concrete in a predominately dry excavation.

Slurry Method. The slurry construction method may be used at sites where dewatering the excavation would cause collapse of the shaft sidewalls or when the volume and head of water flowing into the shaft is likely to contaminate the concrete during placement resulting in a shaft defect. This method uses slurry, or in rare cases water, to maintain stability of the shaft sidewall while advancing the shaft excavation. After the shaft excavation is completed, the slurry level in the shaft shall be kept at an elevation to maintain stability of the shaft sidewall, maintain stability of the shaft base, and prevent additional groundwater from entering the shaft. The shaft base shall be cleaned, the reinforcement cage shall be set, and the concrete shall be discharged at the bottom of the shaft excavation, displacing the slurry upwards.

- (b) Temporary Casing Method. Temporary casing shall be used when either the dry or slurry methods provide inadequate support to prevent sidewall caving or excessive deformation of the shaft excavation. Temporary casing may be used with slurry or be used to reduce the flow of water into the excavation to allow dewatering and concrete placement in a dry shaft excavation. Temporary casing shall not be allowed to remain permanently without the approval of the Engineer.

During removal of the temporary casing, the level of concrete in the casing shall be maintained at a level such that the head pressure inside the casing is a minimum of 1.25 times the head pressure outside the casing, but in no case is less than 5 ft (1.5 m) above the bottom of the casing. Casing removal shall be at a slow, uniform rate with the pull in line with the shaft axis. Excessive rotation of the casing shall be avoided to limit deformation of the reinforcement cage. In addition, the slump requirements during casing removal shall be according to Article 516.12.

When called for on the plans, the Contractor shall install a permanent casing as specified. Permanent casing may be used as a shaft excavation support method or may be installed after shaft excavation is completed using one of the above methods. After construction, if voids are present between the permanent casing and the drilled excavation, the voids shall be filled with grout by means of tremie(s) or concrete pump which shall be lowered to the bottom of the excavation. The contractor's means and methods for grout placement shall fill the annular void(s) between the permanent casing and the surrounding earth material to restore and provide lateral earth resistance to the shaft. Grout yield checks shall be performed by the contractor for submittal to the Engineer. Permanent casing shall not remain in place beyond the limits shown on the plans without the specific approval of the Engineer.

When the shaft extends above the streambed through a body of water and permanent casing is not shown, the portion above the streambed shall be formed with removable casings, column forms, or other forming systems as approved by the Engineer. The forming system shall not scar or spall the finished concrete or leave in place any forms or casing within the removable form limits as shown on the plans unless approved as part of the installation procedure. The forming system shall not be removed until the concrete has attained a minimum compressive strength of 2500 psi (17,200 kPa) and cured for a minimum of 72 hours. For shafts extending through water, the concrete shall be protected from water action after placement for a minimum of seven days.

516.07 Slurry. When slurry is used, the Contractor shall provide a technical representative of the slurry additive manufacturer at the site prior to introduction of the slurry into the first shaft where slurry will be used, and during drilling and completion of a minimum of one shaft to adjust the slurry mix to the specific site conditions. During construction, the level of the slurry shall be maintained a minimum of 5 feet (1.5 m) above the height required to prevent caving of the shaft excavation. In the event of a sudden or significant loss of slurry in the shaft excavation, the construction of that foundation shall be stopped and the shaft excavation backfilled or supported by temporary casing, until a method to stop slurry loss, or an alternate construction procedure, has been approved by the Engineer.

- (a) General Properties. The material used to make the slurry shall not be detrimental to the concrete or surrounding ground. Mineral slurries shall have both a mineral grain size that remains in suspension and sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. Polymer slurries shall have sufficient viscosity and gel characteristics to transport excavated material to suitable screening systems or settling tanks. The percentage and specific gravity of the material used to make the slurry shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement.

If approved by the Engineer, the Contractor may use water and excavated soils as drilling slurry. In this case, the range of acceptable values for density, viscosity and pH, as shown in the following table for bentonite slurry shall be met.

When water is used as the slurry to construct rock sockets in limestone, dolomite, sandstone or other formations that are not erodible, the requirements for slurry testing shall not apply if the entire fluid column is replaced with fresh water after drilling. To do so, fresh water shall be introduced at the top of the shaft excavation and existing water used during drilling shall be pumped out of the shaft excavation from the bottom of the shaft excavation until the entire volume of fluid has been replaced.

- (b) Preparation. Prior to introduction into the shaft excavation, the manufactured slurry admixture shall be pre-mixed thoroughly with clean, fresh water and for adequate time in accordance with the slurry admixture manufacturer's recommendations. Slurry tanks of adequate capacity shall be used for slurry mixing, circulation, storage and treatment. No excavated slurry pits will be allowed in lieu of slurry tanks without approval from the Engineer. Adequate desanding equipment shall be provided to control slurry properties during the drilled shaft excavation in accordance with the values provided in Table 1.
- (c) Quality Control. Quality control tests shall be performed on the slurry to determine density, viscosity, sand content and pH of freshly mixed slurry, recycled slurry and slurry in the shaft excavation. Tests of slurry samples from within two feet of the bottom and at mid-height of the shaft excavation shall be conducted in each shaft excavation during the excavation process to measure the consistency of the slurry. A minimum of four sets of tests shall be conducted during the first eight hours of slurry use on the project. When a series of four test results do not change more than 1% from the initial test, the testing frequency may be decreased to one set every four hours of slurry use. Reports of all tests, signed by an authorized representative of the Contractor, shall be furnished to the Engineer upon completion of each drilled shaft. The physical properties of the slurry shall be as shown in Table 1.

The slurry shall be sampled and tested less than 1 hour before concrete placement. Any heavily contaminated slurry that has accumulated at the bottom of the shaft shall be removed. The contractor shall perform final shaft bottom cleaning after suspended solids have settled from the slurry. Concrete shall not be placed if the slurry does not have the required physical properties.

Table 1 – SLURRY PROPERTIES				
	Bentonite	Emulsified Polymer	Dry Polymer	Test Method
Density, lb/cu ft (kg/cu m) (at introduction)	65.2 ± 1.6 ¹ (1043.5 ± 25.6)	63 (1009.0) max.	63 (1009.0) max.	ASTM D 4380
Density, lb/cu ft (kg/cu m) (prior to concrete placement)	67.0 ± 3.5 ¹ (1073.0 ± 56.0)	63 (1009.0) max.	63 (1009.0) max.	ASTM D 4380
Viscosity ² , sec/qt (sec/L)	46 ± 14 (48 ± 14)	38 ± 5 (40 ± 5)	65 ± 15 (69 ± 16)	ASTM D 6910
pH	9.0 ± 1.0	9.5 ± 1.5	9.0 ± 2.0	ASTM D 4972
Sand Content, percent by volume (at introduction)	4 max.	1 max.	1 max.	ASTM D 4381
Sand Content, percent by volume (prior to concrete placement)	10 max.	1 max.	1 max.	ASTM D 4381
Contact Time ³ , hours	4 max.	72 max.	72 max	

Note 1. When the slurry consists of only water and excavated soils, the density shall not exceed 70 lb/cu ft (1121 kg/cu m).

Note 2. Higher viscosities may be required in loose or gravelly sand deposits.

Note 3. Contact time is the time without agitation and sidewall cleaning.

516.08 Obstructions. An obstruction is an unknown isolated object that causes the shaft excavation method to experience a significant decrease in the actual production rate and requires the Contractor to core, break up, push aside, or use other means to mitigate the obstruction. Subsurface conditions such as boulders, cobbles, or logs and buried infrastructure such as footings, piling, or abandoned utilities, when shown on the plans, shall not constitute an obstruction. When an obstruction is encountered, the Contractor shall notify the Engineer immediately and upon concurrence of the Engineer, the Contractor shall mitigate the obstruction with an approved method.

516.09 Top of Rock. The top of rock will be considered as the point where rock, defined as bedded deposits and conglomerate deposits exhibiting the physical characteristics and difficulty of rock removal as determined by the Engineer, is encountered which cannot be drilled with augers and/or underreaming tools configured to be effective in the soils indicated in the contract documents.

516.10 Design Modifications. If the top of rock elevation differs from that shown on the plans by more than 10 percent of the length of the drilled shaft above the rock, the Engineer shall be contacted to determine if any drilled shaft design changes may be required. In addition, if the type of soil or rock encountered is not similar to that shown in the subsurface exploration data, the Contractor may be required to extend the drilled shaft length(s) beyond those specified in the plans. In either case, the Engineer will determine if revisions are necessary and the extent of the modifications required.

516.11 Excavation Cleaning and Inspection. Materials removed or generated from the shaft excavations shall be disposed of according to Article 202.03.

After excavation, each shaft shall be cleaned. For a drilled shaft terminating in soil, the depth of sediment or debris shall be a maximum of 1 1/2 in. (38 mm). For a drilled shaft terminating in rock, the depth of sediment or debris shall be a maximum of 1/2 in. (13 mm).

A shaft excavation shall be overreamed when, in the opinion of the Engineer, the sidewall has softened, swelled, or has a buildup of slurry cake. Overreaming may also be required to correct a shaft excavation which has been drilled out of tolerance. Overreaming may be accomplished with a grooving tool, overreaming bucket, or other approved equipment. Overreaming thickness shall be a minimum of 1/2 in. (13 mm) and a maximum of 3 in. (75 mm).

516.12 Reinforcement. This work shall be according to Section 508 and the following.

The shaft excavation shall be cleaned and inspected prior to placing the reinforcement cage. The reinforcement cage shall be completely assembled prior to drilling and be ready for adjustment in length as required by the conditions encountered. The reinforcement cage shall be lifted using multiple point sling straps or other approved methods to avoid reinforcement cage distortion or stress. Cross frame stiffeners may be required for lifting or to keep the reinforcement cage in proper position during lifting and concrete placement.

The Contractor shall attach rolling spacers to keep the reinforcement cage centered within the shaft excavation during concrete placement and to ensure that at no point will the finished shaft have less than the minimum concrete cover(s) shown on the plans. The rolling spacers or other approved non-corrosive spacing devices shall be installed within 2 ft (0.6 m) of both the top and bottom of the drilled shaft and at intervals not exceeding 10 ft (3 m) throughout the length of the shaft to ensure proper reinforcement cage alignment and clearance for the entire shaft. The number of rolling spacers at each level shall be one for each 1.0 ft (300 mm) of shaft diameter, with a minimum of four rolling spacers at each level. For shafts with different shaft diameters throughout the length of the excavation, different sized rolling spacers shall be provided to ensure the reinforcement cage is properly positioned throughout the entire length of the shaft.

When a specific concrete cover between the base of the drilled shaft and the reinforcement cage is shown on the plans, the bottom of the reinforcement cage shall be supported so that the proper concrete cover is maintained.

If the conditions differ such that the length of the shaft is increased, additional longitudinal bars shall be either mechanically spliced or lap spliced to the lower end of the reinforcement cage and confined with either hoop ties or spirals. The Contractor shall have additional reinforcement available or fabricate the reinforcement cages with additional length as necessary to make the required adjustments in a timely manner as dictated by the encountered conditions. The additional reinforcement may be non-epoxy coated.

516.13 Concrete Placement. Concrete work shall be performed according to the following.

Throughout concrete placement the head pressure inside the drilled shaft shall be at least 1.1 times the head pressure outside the drilled shaft.

Concrete placement shall begin within 1 hour of shaft cleaning and inspection. The pour shall be made in a continuous manner from the bottom to the top elevation of the shaft as shown on the contract plan or as approved in the Contractor's installation procedure. Concrete placement shall continue after the shaft excavation is full and until 18 in. (450 mm) of good quality, uncontaminated concrete is expelled at the top of shaft. Vibration of the concrete will not be allowed when the concrete is displacing slurry or water. In dry excavations, the concrete in the top 10 ft (3 m) of the shaft shall be vibrated.

When using temporary casing or placing concrete under water or slurry, a minimum of seven days prior to concrete placement, a 4 cu yd (3 cu m) trial batch of the concrete mixture shall be performed to evaluate slump retention. Temporary casing shall be withdrawn before the slump of the concrete drops below 6 in. (150 mm). For concrete placed using the slurry method of construction, the slump of all concrete placed shall be a minimum of 6 in. (150 mm) at the end of concrete placement.

Devices used to place concrete shall have no aluminum parts in contact with concrete.

When the top of the shaft is at the finished elevation and no further concrete placement above the finished elevation is specified, the top of the shaft shall be level and finished according to Article 503.15(a).

Concrete shall be placed by free fall, tremie, or concrete pump subject to the following conditions.

- (a) Free Fall Placement. Concrete shall only be placed by free fall when the rate of water infiltration into the shaft excavation is less than 12 in. (300 mm) per hour and the depth of water in the shaft excavation is less than 3 in. (75 mm) at the time of concrete placement.

Concrete placed by free fall shall fall directly to the base without contacting the reinforcement cage, cross frame stiffeners, or shaft sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Drop chutes used to direct placement of free fall concrete shall consist of a smooth tube. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. The drop chute shall be supported so that free fall does not exceed 60 ft (18.3 m) for conventional concrete or 30 ft (9.1 m) for self-consolidating concrete. If placement cannot be satisfactorily accomplished by free fall in the opinion of the Engineer, either a tremie or pump shall be used to accomplish the pour.

- (b) Tremie and Concrete Pump Placement. Concrete placement shall be according to Article 503.08, except the discharge end of the steel pipe shall remain embedded in the concrete a minimum of 10 ft (3.0 m) throughout concrete placement when displacing slurry or water.

516.14 Construction Tolerances. The following construction tolerances shall apply to all drilled shafts.

- (a) Center of Shaft. The center of the drilled shaft shall be within 3 in. (75 mm) of the plan station and offset at the top of the shaft.
- (b) Center of Reinforcement Cage. The center of the reinforcement cage shall be within 1 1/2 in. (40 mm) of plan station and offset at the top of the shaft.
- (c) Vertical Plumbness of Shaft. The out of vertical plumbness of the shaft shall not exceed 1.5 percent.
- (d) Vertical Plumbness of Reinforcement Cage. The out of vertical plumbness of the shaft reinforcement cage shall not exceed 0.83 percent.
- (e) Top of Shaft. The top of the shaft shall be no more than 1 in. (25 mm) above and no more than 3 in. (75 mm) below the plan elevation.
- (f) Top of Reinforcement Cage. The top of the reinforcement cage shall be no more than 1 in. (25 mm) above and no more than 3 in. (75 mm) below the plan elevation.
- (g) Bottom of shaft. Excavation equipment and methods used to complete the shaft excavation shall have a nearly planar bottom. The cutting edges of excavation equipment used to create the bottom of shafts in rock shall be normal to the vertical axis of the shaft within a tolerance of 6.25 percent.

516.15 Method of Measurement. This work will be measured for payment in place and the volume computed in cubic yards (cubic meters). The volume will be computed using the plan diameter of the shaft multiplied by the measured length of the shaft. The length of shaft in soil will be computed as the difference in elevation between the top of the drilled shaft shown on the plans, or as installed as part of the Contractor's installation procedure, and the bottom of the shaft or the top of rock (when present) whichever is higher. The length of shaft in rock will be computed as the difference in elevation between the measured top of rock and the bottom of the shaft.

When permanent casing is specified, it will be measured for payment in place, in feet (meters). Permanent casing installed at the Contractor's option will not be measured for payment.

Reinforcement furnished and installed will be measured for payment according to Article 508.07.

516.16 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for DRILLED SHAFT IN SOIL, and/or DRILLED SHAFT IN ROCK.

Permanent casing will be paid for at the contract unit price per foot (meter) for PERMANENT CASING.

Reinforcement furnished and installed will be paid for according to Article 508.08.

Obstruction mitigation will be paid for according to Article 109.04."

BAR SPLICERS, HEADED REINFORCEMENT

Effective: September 2, 2022

Revised: October 27, 2023

Add the following to Article 508.08(b):

When bar splicers are epoxy-coated, all damaged or uncoated areas near the threaded ends shall be coated with a two-part epoxy according to ASTM D 3963 (D 3963M). All threaded ends of Stage II construction threaded splicer bars shall be coated according to ASTM D 3963 or dipped in an epoxy-mastic primer prior to joining the Stage II construction threaded splicer bar to the threaded coupler.

Add the following Article 508.02 (d)

Bar Terminators 1006.10(a)(1)h

Add the following paragraph after Article 508.08 (c):

Bar terminators are threaded, headed attachments to reinforcement to form headed reinforcement. When specified on the plans, a bar terminator shall be attached to the designated reinforcement for development.

Add the following 4th paragraph to Article 508.11:

Bar Terminators will be paid for at the contract unit price per each for BAR TERMINATORS.

Add the following to Article 1006.10(a)(1)g:

For bar splicers with welded connections between the threaded coupler and threaded rod, the Stage I construction threaded splicer bar shall be welded to the threaded coupler using an all-around fillet weld.

Add the following Article 1006.10(a)(1)h:

Bar Terminators. Designated bars shall use a bar terminator to form headed reinforcement. Headed reinforcement shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706, except the connection strength of the bar terminator to the reinforcement bar shall meet, in tension, at least 125 percent of the specified yield strength of the reinforcement bar. The bar terminator shall be on the Department's qualified product list.

When the reinforcement bar to receive the bar terminator is epoxy coated, the bar terminator shall also be epoxy coated according to ASTM A 775 (A 775M)

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012

Revised: April 1, 2022

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 (ASI).

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.07
(b) Reclaimed Asphalt Pavement (RAP)	1031.09

303.03 Equipment. The vibratory roller shall be according to Article 1101.01, or as approved by the Engineer. Vibratory machines, such as tampers, shall be used in areas where rollers do not fit.

303.04 Soil Preparation. The minimum immediate bearing value (IBV) of the soil below the improved subgrade shall be according to the Department's "Subgrade Stability Manual" for the aggregate thickness specified.

303.05 Placing and Compacting. The maximum nominal lift thickness of aggregate gradations CA 2, CA 6, and CA 10 when compacted shall be 9 in. (225 mm). The maximum nominal lift thickness of aggregate gradations CS 1, CS 2, and RR 1 when compacted shall be 24 in. (600 mm).

The top surface of the aggregate subgrade improvement shall consist of a layer of capping aggregate gradations CA 6 or CA 10 that is 3 in. (75 mm) thick after compaction. Capping aggregate will not be required when aggregate subgrade improvement is used as a cubic yard pay item for undercut applications.

Each lift of aggregate 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.

303.06 Finishing and Maintenance. 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.

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

303.08 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 (ASI). 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 ASI material is required, gravel may be used below the top 12 in (300 mm) of ASI.
- (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 ASI thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 1.

The coarse aggregate gradation for total ASI thickness greater than 12 in. (300 mm) shall be CS 1 or CS 2 as shown below or RR 1 according to Article 1005.01(c).

Grad No.	COARSE AGGREGATE SUBGRADE GRADATIONS				
	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 1	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 2		100	80 ± 10	25 ± 15	

Grad No.	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)				
	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 1	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 2		100	80 ± 10	25 ± 15	

- (2) Capping aggregate shall be gradation CA 6 or CA 10."

Add the following to Article 1031.09 of the Standard Specifications:

"(b) RAP in Aggregate Subgrade Improvement (ASI). RAP in ASI shall be according to Articles 1031.01(a), 1031.02(a), 1031.06(a)(1), and 1031.06(a)(2), and the following.

- (1) The testing requirements of Article 1031.03 shall not apply.
- (2) Crushed RAP used for the lower lift may be mechanically blended with aggregate gradations CS 1, CS 2, and RR 1 but it shall be no greater than 40 percent of the total product volume. RAP agglomerations shall be no greater than 4 in. (100 mm).
- (3) For capping aggregate, well graded RAP having 100 percent passing the 1 1/2 in. (38 mm) sieve may be used when aggregate gradations CS 1, CS 2, CA 2, or RR 1 are used in the lower lift. FRAP will not be permitted as capping material.

Blending shall be through calibrated interlocked feeders or a calibrated blending plant such that the prescribed blending percentage is maintained throughout the blending process. The calibration shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered."

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE)

Effective: November 2, 2006

Revised: August 1, 2017

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective: January 1, 2025

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

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

Revise Article 302.02 of the Standard Specifications to read:

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

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

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

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

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

“(c) Cement 1001”

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

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

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

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

Revise Article 352.02 of the Standard Specifications to read:

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

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

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

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

Revise Article 404.02 of the Standard Specifications to read:

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

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

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

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

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

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

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

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

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

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

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

Revise Article 583.01 of the Standard Specifications to read:

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

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

“(a) Cement1001”

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

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

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

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

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

“The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater.”

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

“The ASTM C 1293 test shall be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater.”

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

“The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater.”

Revise Article 1017.01 of the Standard Specifications to read:

“1017.01 Requirements. The mortar shall be high-strength according to ASTM C 387 and shall have a minimum 80.0 percent relative dynamic modulus of elasticity when tested by the Department according to Illinois Modified AASHTO T 161 or AASHTO T 161 when tested by an independent lab. The high-strength mortar shall have a water-soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the high-strength mortar shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. Mixing of the high-strength mortar shall be according to the manufacturer’s specifications. The Department will maintain a qualified product list.”

Revise the fourth sentence of Article 1018.01 of the Standard Specifications to read:

“The ASTM C 1218 test shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department.”

Revise Article 1019.02 of the Standard Specifications to read:

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

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

Note 1. The air-entraining admixture may be in powder or liquid form. Prior to approval, a CLSM air-entraining admixture will be evaluated by the Department. The admixture shall be able to meet the air content requirements of Mix 2. The Department will maintain a qualified product list.”

Revise Article 1019.05 of the Standard Specifications to read:

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

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

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

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

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

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

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

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

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

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

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

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

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

Revise the third sentence of the second paragraph of Article 1020.05(b)(5) of the Standard Specifications to read:

“The qualified product lists of concrete admixtures shall not apply.”

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

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

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

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

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

Revise Article 1021.01 of the Standard Specifications to read:

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

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

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

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

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

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

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

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

Revise Article 1021.03 of the Standard Specifications to read:

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

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

Revise Article 1021.05 of the Standard Specifications to read:

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

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

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

Revise Article 1021.06 of the Standard Specifications to read:

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

Revise Article 1021.07 of the Standard Specifications to read:

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

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

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

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

Add Article 1021.08 of the Standard Specifications as follows:

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

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

Revise Article 1024.01 of the Standard Specifications to read:

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

Materials for the grout shall be according to the following.

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

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

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

The nonshrink grout shall have a water-soluble chloride ion content of less than 0.40 lb/cu yd (0.24 kg/cu m). The test shall be performed according to ASTM C 1218, and the grout shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. Mixing of the nonshrink grout shall be according to the manufacturer's specifications. The Department will maintain a qualified product list.”

Revise Article 1029.02 of the Standard Specifications to read:

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

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

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

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

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

Revise the first two sections of Check Sheet #11 of the Supplemental Specifications and Recurring Special Provisions to read:

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

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

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

Revise the third paragraph of Materials Note 2 of Check Sheet #28 of the Supplemental Specifications and Recurring Special Provisions to read:

"The Department will maintain a qualified product list of synthetic fibers, which will include the minimum required dosage rate. For the minimum required fiber dosage rate based on the Illinois Modified ASTM C 1609 test, a report prepared by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete shall be provided. The report shall show results of tests conducted no more than five years prior to the time of submittal."

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."

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: January 1, 2025

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term “equipment” refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted according to the table below.

Horsepower Range	Model Year and Older
50-99	2003
100-299	2002
300-599	2000
600-749	2001
750 and up	2005

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (<https://www.epa.gov/verified-diesel-tech/verified-technologies-list-clean-diesel>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices 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. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

Diesel Retrofit Deficiency Deduction

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: January 2, 2025

1. OVERVIEW AND GENERAL 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 in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory. Award of the contract is conditioned on meeting the requirements of 49 CFR Part 26, and failure by the Contractor to carry out the requirements of Part 26 is a material breach of the contract and may result in the termination of the contract or such other remedies as the Department deems appropriate.
2. CONTRACTOR ASSURANCE. All assurances set forth in FHWA 1273 are hereby incorporated by reference and will be physically attached to the final contract and all subcontracts.
3. CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. The Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies and that, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform **17.00%** 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 in accordance with the requirements of 49 CFR 26.53 and SBE Memorandum No. 24-02.
4. IDENTIFICATION OF CERTIFIED DBE. Information about certified DBE Contractors can be found in the Illinois UCP Directory. Bidders can obtain additional information and assistance with identifying DBE-certified companies at the Department's website or by contacting the Department's Bureau of Small Business Enterprises at (217) 785-4611.
5. BIDDING PROCEDURES. Compliance with this Special Provision and SBE Policy Memorandum 24-02 is a material bidding requirement. The following shall be included with the bid.
 - (a) DBE Utilization Plan (form SBE 2026) documenting enough DBE participation has been obtained to meet the goal, or a good faith effort has been made to meet the goal even though the efforts did not succeed in obtaining enough DBE participation to meet the goal.
 - (b) Applicable DBE Participation Statement (form SBE 2023, 2024, and/or 2025) for each DBE firm the bidder has committed to perform the work to achieve the contract goal.

The required forms and documentation shall 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 bid if it does not meet the bidding procedures set forth herein and the bid will be declared non-responsive. A bidder declared non-responsive for failure to meet the bidding procedures will not give rise to an administrative reconsideration. In the event the bid is declared non-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.

6. UTILIZATION PLAN EVALUATION. 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 the bidder has committed to DBE participation sufficient to meet the goal, or that the bidder has made good faith efforts to do so, in the event the bidder cannot meet the goal, in order for the Department to 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 Department determines, based upon the documentation submitted, that the bidder has made a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A and the requirements of SBE 2026.

If the Department determines that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan of that determination in accordance with SBE Policy Memorandum 24-02.

7. CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work the bidder commits to have performed by the specified DBEs 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 firms. 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 guidelines for counting goal credit are provided in 49 CFR Part 26.55. In evaluating Utilization Plans for award the Department will count goal credit as set forth in Part 26 and in accordance with SBE Policy Memorandum 24-02.

8. CONTRACT COMPLIANCE. The Contractor must utilize the specific DBEs listed to perform the work and supply the materials for which each DBE is listed in the Contractor's approved Utilization Plan, unless the Contractor obtains the Department's written consent to terminate the DBE or any portion of its work. The DBE Utilization Plan approved by SBE is a condition-of-award, and any deviation to that Utilization Plan, the work set forth therein to be performed by DBE firms, or the DBE firms specified to perform that work, must be approved, in writing, by the Department in accordance with federal regulatory requirements. Deviation from the DBE Utilization Plan condition-of-award without such written approval is a violation of the contract and may result in termination of the contract or such other remedy the Department deems appropriate. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan.
- (a) NOTICE OF DBE PERFORMANCE. The Contractor shall provide the Engineer with at least three days advance notice of when all DBE firms are expected to perform the work committed under the Contractor's Utilization Plan.
- (b) SUBCONTRACT. If awarded the contract, the Contractor is required to enter into written subcontracts with all DBE firms indicated in the approved Utilization Plan and must provide copies of fully executed 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.
- (c) PAYMENT TO DBE FIRMS. 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 goal has been paid to the DBE. The Contractor shall document and report all payments for work performed by DBE certified firms in accordance with Article 109.11 of the Standard Specifications. All records of payment for work performed by DBE certified firms shall be made available to the Department upon request.
- (d) FINAL PAYMENT. After the performance of the final item of work or trucking, or delivery of material by a DBE and final payment 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 (form SBE 2115) to the Engineer. 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.
- (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.

EROSION CONTROL BLANKET (BDE)

Effective: August 1, 2025

Revise Article 251.02 of the Standard Specifications to read:

“251.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Compost	1081.05(b)
(b) Mulch	1081.06(a)
(c) Chemical Mulch Binder	1081.06(a)(3)
(d) Chemical Compost Binder	1081.06(a)(4)
(e) Erosion Control Blanket	1081.10(a)
(f) Wildlife Friendly Erosion Control Blanket	1081.10(b)
(g) Wire Staples	1081.10(c)
(h) Wood Stakes	1081.10(d)
(i) Turf Reinforcement Mat	1081.10(e)”

Revise the first and second sentences of Article 251.04 of the Standard Specifications to read:

“251.04 Erosion Control Blanket. All erosion control blanket materials shall be placed on the areas specified within 24 hours of seed placement.”

Revise the second paragraph of Article 251.04 of the Standard Specifications to read:

“After the area has been properly shaped, fertilized (when applicable), and seeded, the blanket shall be laid out flat, evenly, and smoothly, without stretching the material. The erosion control blanket shall be placed according to the manufacture’s recommendations.”

Revise the second sentence of Article 251.06(b) of the Standard Specifications to read:

“Erosion control blanket, wildlife friendly erosion control blanket, and turf reinforcement mat will be measured for payment in square yards (square meters).”

Revise Article 251.07 of the Standard Specifications to read:

“251.07 Basis of Payment. This work will be paid for at the contract unit price per acre (hectare) for MULCH, of the method specified; and at the contract unit price per square yard (square meter) for EROSION CONTROL BLANKET, WILDLIFE FRIENDLY EROSION CONTROL BLANKET, or TURF REINFORCEMENT MAT.”

Revise first sentence of Article 280.04(h) of the Standard Specifications to read:

“This system consists of temporarily installing erosion control blanket or wildlife friendly erosion control blanket over areas that are to be reworked during a later construction phase.”

Revise Article 280.08(g) of the Standard Specifications to read:

- “(g) Temporary Erosion Control Blanket. Temporary erosion control blanket will be paid for at the contract unit price per square yard (square meter) for TEMPORARY EROSION CONTROL BLANKET or TEMPORARY WILDLIFE FRIENDLY EROSION CONTROL BLANKET.

The work of removing, storing, and reinstalling the blanket over areas to be reworked more than once will not be paid for separately but shall be included in the cost of the temporary erosion control blanket or temporary wildlife friendly erosion control blanket.”

Revise Article 1081.10 of the Standard Specifications to read:

“**1081.10 Erosion Control Blankets.** The manufacturer shall furnish a certificate with each shipment stating the amount of product furnished and that the material complies with these requirements.

- (a) Erosion Control Blanket. Erosion control blanket shall be covered on top and bottom, also known as double net, with a 100 percent biodegradable woven, natural fiber or jute net meeting the following.

Material	Minimum Value
Excelsior	80%
Straw	100%
Coconut or Coir	100% Coconut or Coir
Straw/Coconut or Coir	70% Straw / 30% Coconut or Coir

- (b) Wildlife Friendly Erosion Control Blanket. Wildlife friendly erosion control blanket shall be according to Article 1081.10(a) except the netting shall be loose weave, also known as leno weave or gauze weave, with a moveable joint.
- (c) Wire Staples. Staples shall be made from No. 11 gauge or heavier uncoated black carbon steel wire, a minimum of 1 in. (25 mm) wide at the top and a minimum overall length of 8 in. (200 mm).
- (d) Wood Stakes. Hardwood blanket anchors shall be nominally 7 in. (180 mm) long from neck of hook to tip of anchor. The anchor shall have a minimum 1/2 in. (13 mm) curving hook to hold the blanket in place.
- (e) Turf Reinforcement Mat (TRM). The TRM shall be comprised of non-degradable, ultraviolet stabilized synthetic fibers, filaments, netting, and/or wire mesh processed into a three-dimensional reinforced mat. The mats may include degradable material to assist with vegetation establishment. Soil filled mats will not be allowed.

The TRM shall meet the following physical and performance properties:

Property	Value	Test Method
Tensile Strength, lb/ft (kN/m)	150 (2.19) min.	ASTM D 6818
UV Stability, (% Tensile Retained)	80 min.	ASTM D 4355 (1000 Hour Exposure)
Resiliency, (% Thickness Retained)	80 min.	ASTM D 6524
Allowable Shear Stress, lb/sq ft (Pa) ^{1/}	8 (384)	ECTC approved test method and independent laboratory

1/ Minimum shear stress the TRM (fully vegetated) can sustain without physical damage or excess erosion (> 1/2 in. (13 mm) soil loss) during a 30 minute flow event in large scale testing.

For TRMs containing degradable components, all property values shall be obtained on the non-degradable portion of the matting alone.”

FUEL COST ADJUSTMENT (BDE)

Effective: April 1, 2009

Revised: August 1, 2017

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

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

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.

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

(b) Fuel Usage Factors.

English Units		
Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000
Metric Units		
Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

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

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

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

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

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

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

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

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

GRADING AND SHAPING DITCHES (BDE)

Effective: January 1, 2023

Delete the second paragraph of Article 214.03 of the Standard Specifications.

Delete the second paragraph of Article 214.04 of the Standard Specifications.

HOT-MIX ASPHALT – LONGITUDINAL JOINT SEALANT (BDE)

Effective: November 1, 2022

Revised: August 1, 2023

Add the following after the second sentence in the eighth paragraph of Article 406.06(h)(2) of the Standard Specifications:

“If rain is forecasted and traffic is to be on the LJS or if pickup/tracking of the LJS material is likely, the LJS shall be covered immediately following its application with FA 20 fine aggregate mechanically spread uniformly at a rate of 1.5 ± 0.5 lb/sq yd (0.75 ± 0.25 kg/sq m). Fine aggregate landing outside of the LJS shall be removed prior to application of tack coat.”

Add the following after the first sentence in the ninth paragraph of Article 406.06(h)(2) of the Standard Specifications:

“LJS half-width shall be applied at a width of 9 ± 1 in. (225 ± 25 mm) in the immediate lane to be placed with the outside edge flush with the joint of the next HMA lift. The vertical face of any longitudinal joint remaining in place shall also be coated.”

Add the following after the eleventh paragraph of Article 406.06(h)(2) of the Standard Specifications:

“LJS Half-Width Application Rate, lb/ft (kg/m) ^{1/}			
Lift Thickness, in. (mm)	Coarse Graded Mixture (IL-19.0, IL-19.0L, IL-9.5, IL-9.5L, IL-4.75)	Fine Graded Mixture (IL-9.5FG)	SMA Mixture (SMA-9.5, SMA-12.5)
$\frac{3}{4}$ (19)	0.44 (0.66)		
1 (25)	0.58 (0.86)		
$1 \frac{1}{4}$ (32)	0.66 (0.98)	0.44 (0.66)	
$1 \frac{1}{2}$ (38)	0.74 (1.10)	0.48 (0.71)	0.63 (0.94)
$1 \frac{3}{4}$ (44)	0.82 (1.22)	0.52 (0.77)	0.69 (1.03)
2 (50)	0.90 (1.34)	0.56 (0.83)	0.76 (1.13)
$\geq 2 \frac{1}{4}$ (60)	0.98 (1.46)		

- 1/ The application rate includes a surface demand for liquid. The thickness of the LJS may taper from the center of the application to a lesser thickness on the edge of the application, provided the correct width and application rate are maintained.”

Revise the second paragraph of Article 406.13(b) of the Standard Specifications to read:

“Aggregate for covering tack, LJS, or FLS will not be measured for payment.”

Add the following to the end of the second paragraph of Article 406.14 of the Standard Specifications:

“Longitudinal joint sealant (LJS) half-width will be paid for at the contract unit price per foot (meter) for LONGITUDINAL JOINT SEALANT, HALF-WIDTH.”

PAVEMENT MARKING INSPECTION (BDE)

Effective: April 1, 2025

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

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

PAVEMENT PATCHING (BDE)

Effective: August 1, 2025

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

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

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

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

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

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

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

PERFORMANCE GRADED ASPHALT BINDER (BDE)

Effective: January 1, 2023

Revise Article 1032.05 of the Standard Specifications to read:

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

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

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

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

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

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

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

- (1) Polymer Modification (SB/SBS or SBR). Elastomers shall be added to the base asphalt binder to achieve the specified performance grade and shall be either a styrene-butadiene diblock, triblock copolymer without oil extension, or a styrene-butadiene rubber. The polymer modified asphalt binder shall be smooth, homogeneous, and be according to the requirements shown in Table 1 or 2 for the grade shown on the plans.

Table 1 - Requirements for Styrene-Butadiene Copolymer (SB/SBS) Modified Asphalt Binders		
Test	Asphalt Grade SB/SBS PG 64-28 SB/SBS PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SB/SBS PG 76-22 SB/SBS PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

Table 2 - Requirements for Styrene-Butadiene Rubber (SBR) Modified Asphalt Binders		
Test	Asphalt Grade SBR PG 64-28 SBR PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SBR PG 76-22 SBR PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
Toughness ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	110 (12.5) min.	110 (12.5) min.
Tenacity ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	75 (8.5) min.	75 (8.5) min.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	40 min.	50 min.

- (2) Ground Tire Rubber (GTR) Modification. GTR modification is the addition of recycled ground tire rubber to liquid asphalt binder to achieve the specified performance grade. GTR shall be produced from processing automobile and/or truck tires by the ambient grinding method or micronizing through a cryogenic process. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall not contain free metal particles, moisture that would cause foaming of the asphalt, or other foreign materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois Modified AASHTO T 27 "Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates" or AASHTO PP 74 "Standard Practice for Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method", a 50 g sample of the GTR shall conform to the following gradation requirements.

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 µm)	95 ± 5
No. 50 (300 µm)	> 20

GTR modified asphalt binder shall be tested for rotational viscosity according to AASHTO T 316 using spindle S27. GTR modified asphalt binder shall be tested for original dynamic shear and RTFO dynamic shear according to AASHTO T 315 using a gap of 2 mm.

The GTR modified asphalt binder shall meet the requirements of Table 3.

Table 3 - Requirements for Ground Tire Rubber (GTR) Modified Asphalt Binders		
Test	Asphalt Grade GTR PG 64-28 GTR PG 70-22	Asphalt Grade GTR PG 76-22 GTR PG 76-28 GTR PG 70-28
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

- (3) Softener Modification (SM). Softener modification is the addition of organic compounds, such as engineered flux, bio-oil blends, modified vegetable oils, glycol amines, and fatty acid derivatives, to the base asphalt binder to achieve the specified performance grade. Softeners shall be dissolved, dispersed, or reacted in the asphalt binder to enhance its performance and shall remain compatible with the asphalt binder with no separation. Softeners shall not be added to modified PG asphalt binder as defined in Articles 1032.05(b)(1) or 1032.05(b)(2).

An Attenuated Total Reflectance-Fourier Transform Infrared spectrum (ATR-FTIR) shall be collected for both the softening compound as well as the softener modified asphalt binder at the dose intended for qualification. The ATR-FTIR spectra shall be collected on unaged softener modified binder, 20-hour Pressurized Aging Vessel (PAV) aged softener modified binder, and 40-hour PAV aged softener modified binder. The ATR-FTIR shall be collected in accordance with Illinois Test Procedure 601. The electronic files spectral files (in one of the following extensions or equivalent: *.SPA, *.SPG, *.IRD, *.IFG, *.CSV, *.SP, *.IRS, *.GAML, *. [0-9], *.IGM, *.ABS, *.DRT, *.SBM, *.RAS) shall be submitted to the Central Bureau of Materials.

Softener modified asphalt binders shall meet the requirements in Table 4.

Table 4 - Requirements for Softener Modified Asphalt Binders	
Test	Asphalt Grade
	SM PG 46-28 SM PG 46-34
	SM PG 52-28 SM PG 52-34
	SM PG 58-22 SM PG 58-28
	SM PG 64-22
Small Strain Parameter (AASHTO PP 113) BBR, ΔT_c , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5°C min.
Large Strain Parameter (Illinois Modified AASHTO T 391) DSR/LAS Fatigue Property, $\Delta G^* _{peak}$, 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	$\geq 54 \%$

The following grades may be specified as tack coats.

Asphalt Grade	Use
PG 58-22, PG 58-28, PG 64-22	Tack Coat"

Revise Article 1031.06(c)(1) and 1031.06(c)(2) of the Standard Specifications to read:

“(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin ABR shall not exceed the amounts listed in the following table.

HMA Mixtures - RAP/RAS Maximum ABR % ^{1/2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface ^{3/}
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.
 - 2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
 - 3/ The maximum ABR percentages for ground tire rubber (GTR) modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.
- (2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % ^{1/ 2/}			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface ^{3/}
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	- -	- -	25
IL-4.75	- -	- -	35

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

Add the following to the end of Note 2 of Article 1030.03 of the Standard Specifications.

“A dedicated storage tank for the ground tire rubber (GTR) modified asphalt binder shall be provided. This tank shall be capable of providing continuous mechanical mixing throughout and/or recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ±0.40 percent.”

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2024

Revised: April 1, 2024

Revise the first paragraph of Article 669.04 of the Standard Specifications to read:

“669.04 Regulated Substances Monitoring. Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities. The excavated soil and groundwater within the work areas shall be managed as either uncontaminated soil, hazardous waste, special waste, or non-special waste.

As part of the regulated substances monitoring, the monitoring personnel shall perform and document the applicable duties listed on form BDE 2732 “Regulated Substances Monitoring Daily Record (RSMDB)”.

Revise the first two sentences of the nineteenth paragraph of Article 669.05 of the Standard Specifications to read:

“The Contractor shall coordinate waste disposal approvals with the disposal facility and provide the specific analytical testing requirements of that facility. The Contractor shall make all arrangements for collection, transportation, and analysis of landfill acceptance testing.”

Revise the last paragraph of Article 669.05 of the Standard Specifications to read:

“The Contractor shall select a permitted landfill facility or CCDD/USFO facility meeting the requirements of 35 Ill. Admin. Code Parts 810-814 or Part 1100, respectively. The Department will review and approve or reject the facility proposed by the Contractor based upon information provided in BDE 2730. The Contractor shall verify whether the selected facility is compliant with those applicable standards as mandated by their permit and whether the facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The use of a Contractor selected facility shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.”

Revise the first paragraph of Article 669.07 of the Standard Specifications to read:

“669.07 Temporary Staging. Soil classified according to Articles 669.05(a)(2), (b)(1), or (c) may be temporarily staged at the Contractor's option. All other soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) shall be managed and disposed of without temporary staging to the greatest extent practicable. If circumstances beyond the Contractor's control require temporary staging of these latter materials, the Contractor shall request approval from the Engineer in writing.

Topsoil for re-use as final cover which has been field screened and found not to exhibit PID readings over daily background readings as documented on the BDE 2732, visual staining or odors, and is classified according to Articles 669.05(a)(2), (a)(3), (a)(4), (b)(1), or (c) may be temporarily staged at the Contractor's option.”

Add the following paragraph after the sixth paragraph of Article 669.11 of the Standard Specifications.

“The sampling and testing of effluent water derived from dewatering discharges for priority pollutants volatile organic compounds (VOCs), priority pollutants semi-volatile organic compounds (SVOCs), or priority pollutants metals, will be paid for at the contract unit price per each for VOCS GROUNDWATER ANALYSIS using EPA Method 8260B, SVOCs GROUNDWATER ANALYSIS using EPA Method 8270C, or RCRA METALS GROUNDWATER ANALYSIS using EPA Methods 6010B and 7471A. This price shall include transporting the sample from the job site to the laboratory.”

Revise the first sentence of the eight paragraph of Article 669.11 of the Standard Specifications to read:

“Payment for temporary staging of soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) to be managed and disposed of, if required and approved by the Engineer, will be paid according to Article 109.04.”

SEEDING (BDE)

Effective: November 1, 2022

Revise Article 250.07 of the Standard Specifications to read:

“250.07 Seeding Mixtures. The classes of seeding mixtures and combinations of mixtures will be designated in the plans.

When an area is to be seeded with two or more seeding classes, those mixtures shall be applied separately on the designated area within a seven day period. Seeding shall occur prior to placement of mulch cover. A Class 7 mixture can be applied at any time prior to applying any seeding class or added to them and applied at the same time.

TABLE 1 - SEEDING MIXTURES			
Class - Type	Seeds	lb/acre (kg/hectare)	
1 Lawn Mixture 1/	Kentucky Bluegrass	100	(110)
	Perennial Ryegrass	60	(70)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	40	(50)
1A Salt Tolerant Lawn Mixture 1/	Kentucky Bluegrass	60	(70)
	Perennial Ryegrass	20	(20)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	20	(20)
	<i>Festuca brevipila</i> (Hard Fescue)	20	(20)
	<i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	60	(70)
1B Low Maintenance Lawn Mixture 1/	Turf-Type Fine Fescue 3/	150	(170)
	Perennial Ryegrass	20	(20)
	Red Top	10	(10)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	20	(20)
2 Roadside Mixture 1/	<i>Lolium arundinaceum</i> (Tall Fescue)	100	(110)
	Perennial Ryegrass	50	(55)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	40	(50)
	Red Top	10	(10)
2A Salt Tolerant Roadside Mixture 1/	<i>Lolium arundinaceum</i> (Tall Fescue)	60	(70)
	Perennial Ryegrass	20	(20)
	<i>Festuca rubra</i> ssp. <i>rubra</i> (Creeping Red Fescue)	30	(20)
	<i>Festuca brevipila</i> (Hard Fescue)	30	(20)
	<i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	60	(70)
3 Northern Illinois Slope Mixture 1/	<i>Elymus canadensis</i> (Canada Wild Rye) 5/	5	(5)
	Perennial Ryegrass	20	(20)
	Alsike Clover 4/	5	(5)
	<i>Desmanthus illinoensis</i> (Illinois Bundleflower) 4/ 5/	2	(2)
	<i>Schizachyrium scoparium</i> (Little Bluestem) 5/	12	(12)
	<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/	10	(10)
	<i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	30	(35)
	Oats, Spring	50	(55)
	Slender Wheat Grass 5/	15	(15)
	Buffalo Grass 5/ 7/	5	(5)
3A Southern Illinois Slope Mixture 1/	Perennial Ryegrass	20	(20)
	<i>Elymus canadensis</i> (Canada Wild Rye) 5/	20	(20)
	<i>Panicum virgatum</i> (Switchgrass) 5/	10	(10)
	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/	12	(12)
	<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/	10	(10)
	<i>Dalea candida</i> (White Prairie Clover) 4/ 5/	5	(5)
	<i>Rudbeckia hirta</i> (Black-Eyed Susan) 5/	5	(5)
	Oats, Spring	50	(55)

Class – Type	Seeds	lb/acre (kg/hectare)
4 Native Grass 2/ 6/	<i>Andropogon gerardi</i> (Big Blue Stem) 5/	4 (4)
	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/	5 (5)
	<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/	5 (5)
	<i>Elymus canadensis</i> (Canada Wild Rye) 5/	1 (1)
	<i>Panicum virgatum</i> (Switch Grass) 5/	1 (1)
	<i>Sorghastrum nutans</i> (Indian Grass) 5/	2 (2)
	Annual Ryegrass	25 (25)
	Oats, Spring	25 (25)
	Perennial Ryegrass	15 (15)
4A Low Profile Native Grass 2/ 6/	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/	5 (5)
	<i>Bouteloua curtipendula</i> (Side-Oats Grama) 5/	5 (5)
	<i>Elymus canadensis</i> (Canada Wild Rye) 5/	1 (1)
	<i>Sporobolus heterolepis</i> (Prairie Dropseed) 5/	0.5 (0.5)
	Annual Ryegrass	25 (25)
	Oats, Spring	25 (25)
	Perennial Ryegrass	15 (15)
4B Wetland Grass and Sedge Mixture 2/ 6/	Annual Ryegrass	25 (25)
	Oats, Spring	25 (25)
	Wetland Grasses (species below) 5/	6 (6)
<u>Species:</u>		<u>% By Weight</u>
<i>Calamagrostis canadensis</i> (Blue Joint Grass)		12
<i>Carex lacustris</i> (Lake-Bank Sedge)		6
<i>Carex slipata</i> (Awl-Fruited Sedge)		6
<i>Carex stricta</i> (Tussock Sedge)		6
<i>Carex vulpinoidea</i> (Fox Sedge)		6
<i>Eleocharis acicularis</i> (Needle Spike Rush)		3
<i>Eleocharis obtusa</i> (Blunt Spike Rush)		3
<i>Glyceria striata</i> (Fowl Manna Grass)		14
<i>Juncus effusus</i> (Common Rush)		6
<i>Juncus tenuis</i> (Slender Rush)		6
<i>Juncus torreyi</i> (Torrey's Rush)		6
<i>Leersia oryzoides</i> (Rice Cut Grass)		10
<i>Scirpus acutus</i> (Hard-Stemmed Bulrush)		3
<i>Scirpus atrovirens</i> (Dark Green Rush)		3
<i>Bolboschoenus fluviatilis</i> (River Bulrush)		3
<i>Schoenoplectus tabernaemontani</i> (Softstem Bulrush)		3
<i>Spartina pectinata</i> (Cord Grass)		4

Class – Type	Seeds	lb/acre (kg/hectare)
5	<p>Forb with Annuals Mixture (Below)</p> <p>Annuals Mixture 2/ 5/ 6/ Forb Mixture (Below)</p> <p>Annuals Mixture - Mixture not exceeding 25 % by weight of any one species, of the following:</p> <p><i>Coreopsis lanceolata</i> (Sand Coreopsis) <i>Leucanthemum maximum</i> (Shasta Daisy) <i>Gaillardia pulchella</i> (Blanket Flower) <i>Ratibida columnifera</i> (Prairie Coneflower) <i>Rudbeckia hirta</i> (Black-Eyed Susan)</p> <p>Forb Mixture - Mixture not exceeding 5 % by weight PLS of any one species, of the following:</p> <p><i>Amorpha canescens</i> (Lead Plant) 4/ <i>Anemone cylindrica</i> (Thimble Weed) <i>Asclepias tuberosa</i> (Butterfly Weed) <i>Aster azureus</i> (Sky Blue Aster) <i>Symphyotrichum leave</i> (Smooth Aster) <i>Aster novae-angliae</i> (New England Aster) <i>Baptisia leucantha</i> (White Wild Indigo) 4/ <i>Coreopsis palmata</i> (Prairie Coreopsis) <i>Echinacea pallida</i> (Pale Purple Coneflower) <i>Eryngium yuccifolium</i> (Rattlesnake Master) <i>Helianthus mollis</i> (Downy Sunflower) <i>Heliopsis helianthoides</i> (Ox-Eye) <i>Liatris aspera</i> (Rough Blazing Star) <i>Liatris pycnostachya</i> (Prairie Blazing Star) <i>Monarda fistulosa</i> (Prairie Bergamot) <i>Parthenium integrifolium</i> (Wild Quinine) <i>Dalea candida</i> (White Prairie Clover) 4/ <i>Dalea purpurea</i> (Purple Prairie Clover) 4/ <i>Physostegia virginiana</i> (False Dragonhead) <i>Potentilla arguta</i> (Prairie Cinquefoil) <i>Ratibida pinnata</i> (Yellow Coneflower) <i>Rudbeckia subtomentosa</i> (Fragrant Coneflower) <i>Silphium laciniatum</i> (Compass Plant) <i>Silphium terebinthinaceum</i> (Prairie Dock) <i>Oligoneuron rigidum</i> (Rigid Goldenrod) <i>Tradescantia ohiensis</i> (Spiderwort) <i>Veronicastrum virginicum</i> (Culver's Root)</p>	<p>1 (1)</p> <p>10 (10)</p>

Class – Type	Seeds	lb/acre (kg/hectare)
5A Large Flower Native Forb Mixture 2/ 5/ 6/	Forb Mixture (see below)	5 (5)
<u>Species:</u>		<u>% By Weight</u>
<i>Aster novae-angliae</i> (New England Aster)		5
<i>Echinacea pallida</i> (Pale Purple Coneflower)		10
<i>Helianthus mollis</i> (Downy Sunflower)		10
<i>Heliopsis helianthoides</i> (Ox-Eye)		10
<i>Liatris pycnostachya</i> (Prairie Blazing Star)		10
<i>Ratibida pinnata</i> (Yellow Coneflower)		5
<i>Rudbeckia hirta</i> (Black-Eyed Susan)		10
<i>Silphium laciniatum</i> (Compass Plant)		10
<i>Silphium terebinthinaceum</i> (Prairie Dock)		20
<i>Oligoneuron rigidum</i> (Rigid Goldenrod)		10
5B Wetland Forb 2/ 5/ 6/	Forb Mixture (see below)	2 (2)
<u>Species:</u>		<u>% By Weight</u>
<i>Acorus calamus</i> (Sweet Flag)		3
<i>Angelica atropurpurea</i> (Angelica)		6
<i>Asclepias incarnata</i> (Swamp Milkweed)		2
<i>Aster puniceus</i> (Purple Stemmed Aster)		10
<i>Bidens cernua</i> (Beggarticks)		7
<i>Eutrochium maculatum</i> (Spotted Joe Pye Weed)		7
<i>Eupatorium perfoliatum</i> (Boneset)		7
<i>Helenium autumnale</i> (Autumn Sneeze Weed)		2
<i>Iris virginica shrevei</i> (Blue Flag Iris)		2
<i>Lobelia cardinalis</i> (Cardinal Flower)		5
<i>Lobelia siphilitica</i> (Great Blue Lobelia)		5
<i>Lythrum alatum</i> (Winged Loosestrife)		2
<i>Physostegia virginiana</i> (False Dragonhead)		5
<i>Persicaria pensylvanica</i> (Pennsylvania Smartweed)		10
<i>Persicaria lapathifolia</i> (Curlytop Knotweed)		10
<i>Pychanthemum virginianum</i> (Mountain Mint)		5
<i>Rudbeckia laciniata</i> (Cut-leaf Coneflower)		5
<i>Oligoneuron riddellii</i> (Riddell Goldenrod)		2
<i>Sparganium eurycarpum</i> (Giant Burreed)		5
6 Conservation Mixture 2/ 6/	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/ <i>Elymus canadensis</i> (Canada Wild Rye) 5/ Buffalo Grass 5/ 7/ Vernal Alfalfa 4/ Oats, Spring	5 (5) 2 (2) 5 (5) 15 (15) 48 (55)
6A Salt Tolerant Conservation Mixture 2/ 6/	<i>Schizachyrium scoparium</i> (Little Blue Stem) 5/ <i>Elymus canadensis</i> (Canada Wild Rye) 5/ Buffalo Grass 5/ 7/ Vernal Alfalfa 4/ Oats, Spring <i>Puccinellia distans</i> (Fults Saltgrass or Salty Alkaligrass)	5 (5) 2 (2) 5 (5) 15 (15) 48 (55) 20 (20)
7 Temporary Turf Cover Mixture	Perennial Ryegrass Oats, Spring	50 (55) 64 (70)

Notes:

- 1/ Seeding shall be performed when the ambient temperature has been between 45 °F (7 °C) and 80 °F (27 °C) for a minimum of seven (7) consecutive days and is forecasted to be the same for the next five (5) days according to the National Weather Service.
- 2/ Seeding shall be performed in late fall through spring beginning when the ambient temperature has been below 45 °F (7 °C) for a minimum of seven (7) consecutive days and ending when the ambient temperature exceeds 80 °F (27 °C) according to the National Weather Service.
- 3/ Specific variety as shown in the plans or approved by the Engineer.
- 4/ Inoculation required.
- 5/ Pure Live Seed (PLS) shall be used.
- 6/ Fertilizer shall not be used.
- 7/ Seed shall be primed with KNO₃ to break dormancy and dyed to indicate such.

Seeding will be inspected after a period of establishment. The period of establishment shall be six (6) months minimum, but not to exceed nine (9) months. After the period of establishment, areas not exhibiting 75 percent uniform growth shall be interseeded or reseeded, as determined by the Engineer, at no additional cost to the Department."

SHORT TERM AND TEMPORARY PAVEMENT MARKINGS (BDE)

Effective: April 1, 2024

Revised: April 2, 2024

Revise Article 701.02(d) of the Standard Specifications to read:

"(d) Pavement Marking Tapes (Note 3)1095.06"

Add the following Note to the end of Article 701.02 of the Standard Specifications:

"Note 3. White or yellow pavement marking tape that is to remain in place longer than 14 days shall be Type IV tape."

Revise Article 703.02(c) of the Standard Specifications to read:

"(c) Pavement Marking Tapes (Note 1)1095.06"

Add the following Note to the end of Article 703.02 of the Standard Specifications:

"Note 1. White or yellow pavement marking tape that is to remain in place longer than 14 days shall be Type IV tape."

Revise Article 1095.06 of the Standard Specifications to read:

“1095.06 Pavement Marking Tapes. Type I white or yellow marking tape shall consist of glass spheres embedded into a binder on a foil backing that is precoated with a pressure sensitive adhesive. The spheres shall be of uniform gradation and distributed evenly over the surface of the tape.

Type IV tape shall consist of white or yellow tape with wet reflective media incorporated to provide immediate and continuing retroreflection in wet and dry conditions. The wet retroreflective media shall be bonded to a durable polyurethane surface. The patterned surface shall have approximately 40 ± 10 percent of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed reflective elements or particles.

Blackout tape shall consist of a matte black, non-reflective, patterned surface that is precoated with a pressure sensitive adhesive.

- (a) Color. The white and yellow markings shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degrees circumferential/zero degree geometry, illuminant D65, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

Color	Daylight Reflectance %Y
White	65 min.
Yellow *	36 - 59

*Shall match Aerospace Material Specification Standard 595 33538 (Orange Yellow) and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

- (b) Retroreflectivity. The white and yellow markings shall be retroreflective. Reflective values measured in accordance with the photometric testing procedure of ASTM D 4061 shall not be less than those listed in the table below. The coefficient of retroreflected luminance, R_L , shall be expressed as average millicandelas/footcandle/sq ft (millicandelas/lux/sq m), measured on a 3.0 x 0.5 ft (900 mm x 150 mm) panel at 86 degree entrance angle.

Coefficient of Retroreflected Luminance, R_L , Dry					
Type I			Type IV		
Observation Angle	White	Yellow	Observation Angle	White	Yellow
0.2°	2700	2400	0.2°	1300	1200
0.5°	2250	2000	0.5°	1100	1000

Wet retroreflectance shall be measured for Type IV under wet conditions according to ASTM E 2177 and meet the following.

Wet Retroreflectance, Initial R_L	
Color	R_L 1.05/88.76
White	300
Yellow	200

- (c) Skid Resistance. The surface of Type IV and blackout markings shall provide a minimum skid resistance of 45 BPN when tested according to ASTM E 303.
- (d) Application. The pavement marking tape shall have a precoated pressure sensitive adhesive and shall require no activation procedures. Test pieces of the tape shall be applied according to the manufacturer's instructions and tested according to ASTM D 1000, Method A, except that a stiff, short bristle roller brush and heavy hand pressure will be substituted for the weighted rubber roller in applying the test pieces to the metal test panel. Material tested as directed above shall show a minimum adhesion value of 750 g/in. (30 g/mm) width at the temperatures specified in ASTM D 1000. The adhesive shall be resistant to oils, acids, solvents, and water, and shall not leave objectionable stains or residue after removal. The material shall be flexible and conformable to the texture of the pavement.
- (e) Durability. Type IV and blackout tape shall be capable of performing for the duration of a normal construction season and shall then be capable of being removed intact or in large sections at pavement temperatures above 40 °F (4 °C) either manually or with a roll-up device without the use of sandblasting, solvents, or grinding. The Contractor shall provide a manufacturer's certification that the material meets the requirements for being removed after the following minimum traffic exposure based on transverse test decks with rolling traffic.
- (1) Time in place - 400 days
 - (2) ADT per lane - 9,000 (28 percent trucks)
 - (3) Axle hits - 10,000,000 minimum

Samples of the material applied to standard specimen plates will be measured for thickness and tested for durability in accordance with ASTM D 4060, using a CS-17 wheel and 1000-gram load, and shall meet the following criteria showing no significant change in color after being tested for the number of cycles indicated.

Test	Type I	Type IV	Blackout
Minimum Initial Thickness, mils (mm)	20 (0.51)	65 (1.65) ^{1/} 20 (0.51) ^{2/}	65 (1.65) ^{1/} 20 (0.51) ^{2/}
Durability (cycles)	5,000	1,500	1,500

1/ Measured at the thickest point of the patterned surface.

2/ Measured at the thinnest point of the patterned surface.

The pavement marking tape, when applied according to the manufacturer's recommended procedures, shall be weather resistant and shall show no appreciable fading, lifting, or shrinkage during the useful life of the marking. The tape, as applied, shall be of good appearance, free of cracks, and edges shall be true, straight, and unbroken.

(f) Sampling and Inspection.

(1) Sample. Prior to approval and use of Type IV pavement marking tape, the manufacturer shall submit a notarized certification from an independent laboratory, together with the results of all tests, stating that the material meets the requirements as set forth herein. The independent laboratory test report shall state the lot tested, the manufacturer's name, and the date of manufacture.

After initial approval by the Department, samples and certification by the manufacturer shall be submitted for each subsequent batch of Type IV tape used. The manufacturer shall submit a certification stating that the material meets the requirements as set forth herein and is essentially identical to the material sent for qualification. The certification shall state the lot tested, the manufacturer's name, and the date of manufacture.

(2) Inspection. The Contractor shall provide a manufacturer's certification to the Engineer stating the material meets all requirements of this specification. All material samples for acceptance tests shall be taken or witnessed by a representative of the Bureau of Materials and shall be submitted to the Engineer of Materials, 126 East Ash Street, Springfield, Illinois 62704-4766 at least 30 days in advance of the pavement marking operations."

SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)

Effective: January 2, 2023

Add the following to Article 106.01 of the Standard Specifications:

“The final manufacturing process for construction materials and the immediately preceding manufacturing stage for construction materials shall occur within the United States. Construction materials shall include an article, material, or supply that is or consists primarily of the following.

- (a) Non-ferrous metals;
- (b) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- (c) Glass (including optic glass);
- (d) Lumber;
- (e) Drywall.

Items consisting of two or more of the listed construction materials that have been combined through a manufacturing process, and items including at least one of the listed materials combined with a material that is not listed through a manufacturing process shall be exempt.”

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004

Revised: January 1, 2022

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

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

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

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

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

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

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

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

$$SCA = Q \times D$$

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

$$D = MPI_M - MPI_L$$

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

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

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

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

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

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

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

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

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

Attachment

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

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.

The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor's submitted DBE utilization plan.

The report shall be made through the Department's on-line subcontractor payment reporting system within 21 days of making the payment.”

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%”

SUBMISSION OF BIDDERS LIST INFORMATION (BDE)

Effective: January 2, 2025

Revised: March 2, 2025

In accordance with 49 CFR 26.11(c) all DBE and non-DBEs who bid as prime contractors and subcontractors shall provide bidders list information, including all DBE and non-DBE firms from whom the bidder has received a quote or bid to work as a subcontractor, whether or not the bidder has relied upon that bid in placing its bid as the prime contractor.

The bidders list information shall be submitted with the bid using the link provided within the "Integrated Contractor Exchange (iCX)" application of the Department's "EBids System".

SUBMISSION OF PAYROLL RECORDS (BDE)

Effective: April 1, 2021

Revised: November 2, 2023

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

"STATEMENTS AND PAYROLLS

The payroll records shall include the worker's name, social security number, last known address, telephone number, email address, classification(s) of work actually performed, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof), daily and weekly number of hours actually worked in total, deductions made, and actual wages paid.

The Contractor and each subcontractor shall submit certified payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers, last known addresses, telephone numbers, and email addresses shall not be included on weekly submittals. Instead, the payrolls need only include an identification number for each employee (e.g., the last four digits of the employee's social security number). The submittals shall be made using LCPTracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected."

STATE CONTRACTS. Revise Item 3 of Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

- "3. Submission of Payroll Records. The Contractor and each subcontractor shall, no later than the 15th day of each calendar month, file a certified payroll for the immediately preceding month to the Illinois Department of Labor (IDOL) through the Illinois Prevailing Wage Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Prevailing-Wage-Portal.aspx>. Payrolls shall be submitted in the format prescribed by the IDOL.

In addition to filing certified payroll(s) with the IDOL, the Contractor and each subcontractor shall certify and submit payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers shall not be included on weekly submittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted. The submittals shall be made using LCPtracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected."

SURVEYING SERVICES (BDE)

Effective: April 1, 2025

Delete the fourth paragraph of Article 667.04 of the Standard Specifications.

Delete Section 668 of the Standard Specifications.

TRAINING SPECIAL PROVISIONS (BDE)

Effective: October 15, 1975

Revised: September 2, 2021

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

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

The Contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 2. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective: August 1, 2012

Revised: February 2, 2017

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

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

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

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

Finally, the Contractor must maintain all records it creates as a result of participation in the Program on the Contract, and furnish periodic written reports to the IDOT District EEO Officer that document its contractual performance under and compliance with this Special Provision. Finally, through participation in the Program and reimbursement of wages, the Contractor is not relieved of, and IDOT has not waived, the requirements of any federal or state labor or employment law applicable to TPG workers, including compliance with the Illinois Prevailing Wage Act.

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

Basis of Payment: This work will be paid for at the contract unit price of \$15.00 per hour for each utilized certified TPG Program trainee (TRAINEES TRAINING PROGRAM GRADUATE). The estimated total number of hours, unit price, and total price must be included in the schedule of prices for the Contract submitted by Contractor prior to beginning work. The initial number of TPG trainees for which the incentive is available for this contract is 2.

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

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

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

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

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)

Effective: November 1, 2021

Revised: November 1, 2022

Add the following paragraph after the first paragraph of Article 701.08 of the Standard Specifications:

“The Contractor shall equip all vehicles and equipment with high-intensity oscillating, rotating, or flashing, amber or amber-and-white, warning lights which are visible from all directions. In accordance with 625 ILCS 5/12-215, the lights may only be in operation while the vehicle or equipment is engaged in construction operations.”

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: January 2, 2025

The following applies to all Disadvantaged Business Enterprise (DBE) trucks on the project, whether they are utilized for DBE goal credit or not.

The Contractor shall notify the Engineer at least three days prior to DBE trucking activity.

The Contractor shall submit a weekly report of DBE trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) to the Engineer on Department form “SBE 723” within ten business days following the reporting period. The reporting period shall be Sunday through Saturday for each week reportable trucking activities occur.

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

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Revised: January 1, 2025

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports 1106.02”

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

“For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer’s specifications.”

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

“ **701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer’s self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device.”

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

“ **1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices shall be MASH compliant.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices shall be MASH compliant.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as sign supports, speed feedback displays, arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH compliant is available, an NCHRP 350 compliant device may be used, even if manufactured after December 31, 2019.”

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) to read:

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.”

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

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

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

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

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

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

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

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

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

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

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

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

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

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

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

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

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

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

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

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

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

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

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

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment 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, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

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

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA- 1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.*

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. Certified payroll requirements (1) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDLegacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature*. The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification*. The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention*. The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents*. The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers*. The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements*. If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures*. Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay*. Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits*. Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio*. The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates*. Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity*. The use of apprentices and journeymen under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its repurchase costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

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4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

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XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY
SYSTEM OR APPALACHIAN LOCAL ACCESS**

ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.