

021

Letting September 18, 2026

Notice to Bidders, Specifications and Proposal



**Contract No. 61K82
COOK County
Section 22-00206-00-CH (Glenview)
Route FAP 348 (Waukegan Road)
Project SYQD-014 ()
District 1 Construction Funds**

Prepared by

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Checked by

(Printed by authority of the State of Illinois)



**Illinois Department
of Transportation**

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. September 18, 2026 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. 61K82
COOK County
Section 22-00206-00-CH (Glenview)
Project SYQD-014 ()
Route FAP 348 (Waukegan Road)
District 1 Construction Funds**

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

CONTRACT 61K82

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2026

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

ERRATA Standard Specifications for Road and Bridge Construction
 (Adopted 1-1-22) (Revised 1-1-26)

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BDE SPECIAL PROVISIONS

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

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80099		☐	Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2022
80274	328	☒	Aggregate Subgrade Improvement	April 1, 2012	April 1, 2022
80192		☐	Automated Flagger Assistance Device	Jan. 1, 2008	April 1, 2023
80173	331	☒	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80426		☐	Bituminous Surface Treatment with Fog Seal	Jan. 1, 2020	April 1, 2026
80475		☐	Bridge Deck Concrete Overlays	Jan. 1, 2026	
80241		☐	Bridge Demolition Debris	July 1, 2009	
50531		☐	Building Removal	Sept. 1, 1990	Aug. 1, 2022
50261		☐	Building Removal with Asbestos Abatement	Sept. 1, 1990	Aug. 1, 2022
80460	333	☒	Cement, Finely Divided Minerals, Admixtures, Concrete, and Mortar	Jan. 1, 2025	Jan. 1, 2026
80384	350	☒	Compensable Delay Costs	June 2, 2017	April 1, 2019
80198		☐	Completion Date (via calendar days)	April 1, 2008	
80199		☐	Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80461		☐	Concrete Barrier	Jan. 1, 2025	
80453		☐	Concrete Sealer	Nov. 1, 2023	
80261	354	☒	Construction Air Quality – Diesel Retrofit	June 1, 2010	Jan. 1, 2025
80476		☐	Deck Slab Repair	Jan. 1, 2026	
* 80029	356	☒	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	July 2, 2026
80467	360	☒	Erosion Control Blanket	Aug. 1, 2025	
80229	363	☒	Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80452		☐	Full Lane Sealant Waterproofing System	Nov. 1, 2023	
80433		☐	Green Preformed Thermoplastic Pavement Markings	Jan. 1, 2021	Jan. 1, 2022
80471		☐	Guardrail	Nov. 1, 2025	
80472		☐	High Friction Surface Treatment	Nov. 1, 2025	
80456		☐	Hot-Mix Asphalt	Jan. 1, 2024	April 1, 2026
80446	366	☒	Hot-Mix Asphalt – Longitudinal Joint Sealant	Nov. 1, 2022	Aug. 1, 2023
80438		☐	Illinois Works Apprenticeship Initiative – State Funded Contracts	June 2, 2021	April 2, 2024
80483	368	☒	Inlet Filters	April 1, 2026	
* 80477		☐	Longitudinal Tining	Jan. 1, 2026	July 1, 2026
80450		☐	Mechanically Stabilized Earth Retaining Walls	Aug. 1, 2023	Aug. 1, 2025
80478		☐	Modified Longitudinal Construction Joint	Jan. 1, 2026	
80464	370	☒	Pavement Marking	April 1, 2025	Nov. 1, 2025
80468		☐	Pavement Patching	Aug. 1, 2025	
80441	371	☒	Performance Graded Asphalt Binder	Jan 1, 2023	April 1, 2026
80459		☐	Preformed Plastic Pavement Marking	June 2, 2024	
34261		☐	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2022
80473	377	☒	Raised Reflective Pavement Markers	Nov. 1, 2025	
80455	378	☒	Removal and Disposal of Regulated Substances	Jan. 1, 2024	April 1, 2026
80474		☐	Residential Driveway Temporary Signal	Nov. 1, 2025	
* 80445		☐	Seeding	Nov. 1, 2022	July 1, 2026
80457	380	☒	Short Term and Temporary Pavement Markings	April 1, 2024	April 2, 2024
80462	384	☒	Sign Panels and Appurtenances	Jan. 1, 2025	Jan. 1, 2026
80479		☐	Sinusoidal Rumble Strips	Jan. 1, 2026	
80469		☐	Slope Wall	Aug. 1, 2025	
80448	386	☒	Source of Supply and Quality Requirements	Jan. 2, 2023	Jan. 1, 2026
80340		☐	Speed Display Trailer	April 2, 2014	Jan. 1, 2022
80127	388	☒	Steel Cost Adjustment	April 2, 2004	Nov. 1, 2025
80480		☐	Structural Repair of Concrete	Jan. 1, 2026	
80397	390	☒	Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	391	☒	Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
80463	392	☒	Submission of Bidders List Information	Jan. 2, 2025	Mar. 2, 2025

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80482	393	☒	Submission of Payroll Records – Federal Aid Contract	April 1, 2026	
80437		☐	Submission of Payroll Records – State Contract	April 1, 2021	April 1, 2026
80435		☐	Surface Testing of Pavements – IRI	Jan. 1, 2021	Jan. 1, 2023
80465	395	☒	Surveying Services	April 1, 2025	
80481		☐	Temporary Concrete Barrier	Jan. 1, 2026	
80466		☐	Temporary Rumble Strips	April 1, 2025	
* 80484		☐	Tolerance in Thickness for Continuously Reinforced PCC Pavement	July 1, 2026	
80470	396	☒	Traffic Signal Backplate	Aug. 1, 2025	
20338	397	☒	Training Special Provisions	Oct. 15, 1975	Sept. 2, 2021
80429		☐	Ultra-Thin Bonded Wearing Course	April 1, 2020	Jan. 1, 2022
80439	400	☒	Vehicle and Equipment Warning Lights	Nov. 1, 2021	Nov. 1, 2022
80458		☐	Waterproofing Membrane System	Aug. 1, 2024	
80302	401	☒	Weekly DBE Trucking Reports	June 2, 2012	Jan. 2, 2025
80454		☐	Wood Sign Support	Nov. 1, 2023	
80427	402	☒	Work Zone Traffic Control Devices	Mar. 2, 2020	Jan. 1, 2026
* 80485	405	☒	Work Zone Width Restriction	July 1, 2026	
80071	406	☒	Working Days	Jan. 1, 2002	

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2022 (hereinafter referred to as the "Standard Specifications"); the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD); the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids; and the "Supplemental Specifications and Recurring Special Provisions", adopted January 1, 2026, indicated on the Check Sheet included here in which apply to and govern the construction of FAP 0348 (Waukegan Road), Section 22-00206-00-CH, Project No. SYQD(014), Contract No. 61K82, and in case of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project is located in the Village of Glenview, Cook County. The project limits on Waukegan Road are from approximately 510 feet south to 585 feet north of East Lake Avenue. The project limits on East Lake Avenue are from approximately 945 feet west to 890 feet east of Waukegan Road. The project has a total gross and net length of 2,931.54 feet (0.555 miles).

DESCRIPTION OF PROJECT

The work consists of earth excavation, pavement and median removal, hot-mix asphalt surface removal, construction of storm sewers, hot-mix asphalt binder and surface course, combination concrete curb and gutter, traffic signal modernization, street lighting, thermoplastic and modified urethane pavement markings, sodding, and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

WORK RESTRICTIONS

The Contractor shall not be allowed to shift traffic into the Stage 2 configuration prior to 8:59 AM on Monday, April 5, 2027, unless approved by the Engineer.

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.

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS PERMIT REQUIREMENTS

This Project requires a permit from the Cook County Department of Transportation and Highways. It is the Contractor's responsibility to post the required insurance certificates and bonds prior to starting any work within the County right-of-way. All work shall be performed in accordance with the approved permit included in these special provisions.

No extra compensation will be allowed the Contractor for any expense incurred by complying with the requirements of this Special Provision.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO PERMIT REQUIREMENTS

This Project requires a permit from the Metropolitan Water Reclamation District of Greater Chicago (MWRD). The Village has applied for and received the permit, which is included in these special provisions.

In addition to following the requirements contained within the approved permit, the Contractor shall also coordinate with the Engineer to allow photo documentation of the soil erosion and sediment control practices as well as sanitary sewer and water main crossing installation in case the MWRD is unavailable to conduct inspections. The Contractor shall also coordinate with the Engineer to notify MWRD of the start of construction and for submittal of the MWRD Request for Inspection (RFI).

No extra compensation will be allowed the Contractor for any expense incurred by complying with the requirements of this Special Provision.

COOPERATION WITH ADJACENT CONTRACTS

The intent of this provision is to inform the Contractor that the Department is aware of adjacent contracts that are currently scheduled during the same time period as this contract.

Waukegan Road Resurfacing – IDOT

2023 Pavement Maintenance Program North Side – CCDOTH
Section 23-PVMTN-00-PV

The Contractor is required to cooperate with these adjacent contracts in accordance with Section 105.08 of the Standard Specifications and may be required to modify his staging operations in order to meet these requirements.

TREE REMOVAL RESTRICTIONS

Removal of trees 3" or greater in diameter at breast height shall not be allowed between April 1st and September 30th of any year. The Contractor shall remove all trees prior to the April 1st restriction date. This sequencing shall be included in the Contractor's schedule, and no additional compensation will be allowed the Contractor for meeting these restrictions.

DIRT CONTROL (VOG)

This work shall be done in accordance with Section 280 and Article 107.15 of the Standard Specifications except as modified herein.

Construction operations shall be conducted in such a way as to prevent tracking of debris, mud and soil onto adjacent streets. At the end of each day, the Contractor shall clean up all mud or soil, which has been tracked onto adjacent streets. Sections of streets shall be cleaned and swept by the Contractor without delays (within 24 hours) when determined by the Engineer. The sweeper used shall be a mechanical sweeper with water. If the Contractor will not fulfill cleaning/sweeping requirements provided by the Engineer, the Village reserves the right to hire a sweeping company to clean/sweep the streets at the expense of the Contractor. The Contractor will be responsible to reimburse the Village for the street sweeping expense completed by the Village. The cost associated with dirt control shall be considered included in the contract unit prices bid for the various items involved.

All existing and newly constructed drainage pipes and structures are to be kept free from any debris resulting from construction activities. All storm sewer structures in the construction zone shall be provided with Village approved sedimentation trapping filter assembly. The maintenance work consists of cleaning sediment from filter after each rain event or when determined by Engineer.

The Contractor shall comply with the National Pollutant Discharge Elimination System (NPDES) requirements.

HOURS OF CONSTRUCTION (VOG)

This work shall be done in accordance with Article 107.09 of the Standard Specifications, except as modified herein.

Per Village's Ordinance 18-44, the Contractor shall be required to confine the work activity between 7:00 A.M. - 7:00 P.M. Monday through Friday, 9:00 A.M. - 6:00 P.M. Saturdays, 9:00 A.M. - 5:00 P.M. on Sundays. Work on Saturdays and Sundays shall be coordinated and approved in writing by the Engineer at least 48 hours in advance. No work will be

permitted on Village observed holidays without the Engineer's approval. Work activity, as intended herein, includes warming or starting up of any machinery or engines.

NOTIFICATIONS (VOG)

This work shall be done in accordance with Article 107.09 of the Standard Specifications, except as modified herein.

The Contractor shall be responsible for delivery of verbal information and/or written notification letters (supplied by the Village) to all residents affected by each phase of construction (Examples include, but are not limited to: tree removal, underground utility work, pavement removal, driveway removal, bituminous prime coat application, water/sewer service interruption and pavement placement, etc.) at least 24 hours, but not more than 72 hours, prior to commencement of the identified work. With the intent of providing access to the project sites at all times, the Contractor shall immediately respond to the Engineer's directives regarding driveway access and any other issues which may occur unexpectedly. The Contractor shall be responsible for posting suitable advance notice of scheduled reconstruction streets at least 24 hours, but not more than 48 hours, prior to commencement of the work. "No Parking - Police Order" signs are available upon request at the office of the Engineer. All such notices shall be removed by the Contractor immediately upon the completion of work. The cost associated with notifications shall be considered as included in the contract unit prices bid for the various items involved.

WEEKLY MEETINGS (VOG)

Regular weekly meetings between the Contractor Project Manager and the Engineer are required. The proposed Contractor's working schedule for the next two (2) weeks shall be submitted to the Engineer during each meeting. If any modifications to the proposed schedule are requested by the Engineer, the Contractor shall adjust the proposed schedule accordingly and submit an updated two week working schedule to the Engineer by 12:00pm on Thursday the same week of the meeting.

REQUIRED SUBMITTALS (VOG)

This work shall be done in accordance with Article 105.04 of the Standard Specifications, except as modified herein.

Submit to the Engineer, for approval, shop drawings, product data and catalogue cuts for all underground piping, precast structures, castings, valves, fire hydrants prior to ordering of material.

If during construction any changes to the proposed utility layout are required, the Contractor shall generate detailed sketch and obtain Engineer's approval for the proposed change, prior to commencing with any work deviating from the original engineering drawing.

Record Drawings

Throughout the progress of the work, the Contractor shall maintain an accurate record of changes in the Plans and Contract Documents and upon completion of the work, the Contractor shall submit these recorded changes to the Engineer. The submittal of “as built” record drawings shall include, but not be limited to:

- Exact location of all structures (rim/invert elevation, station/offset, etc.)
- Water Main Valve Vaults and Valve Boxes (rim/wm depth, station/offset, etc)
- Pipe diameter, pipe material, pipe slope, etc.
- Sewer Service connections, fittings, and cleanout locations
- Water B-Box locations and water service connections
- Fire hydrants
- Exact location of all water main bends and all water main fittings
- Water main connections to existing water main
- Street Lights and Traffic Signals – location of foundations, poles, hand holes, controllers, service installation, conduits (including material and diameter)
- Locations of all existing utilities found during construction, which were not previously shown on the plans
- Drainage swales, ditches, and stormwater management areas
- Significant changes to pavement, curb & gutter, driveways, and sidewalks (horizontal layout and vertical elevations)
- Any additional information the Engineer and/or Village deems pertinent to the project record drawings.

The Contractor shall provide the following to the Engineer:

- a) One (1) PDF of the complete set of plans of the final “as built” record drawings with all “as built” changes shown in red.
- b) One (1) electronic Drawing File in DGN (Microstation) or DWG (AutoCAD) format, which includes exact locations of all “as built” record drawing revisions
- c) One Electronic ASCII Point File(s).

- i. The ASCII Point File should be as a point number followed by the point's raw data: Northing, Easting, Elevation, and Point name (Raw Point Description)
Code format – comma delimited, on CD. Example:

Point Number	Northing	Easting	Elevation	Description
1,1993774.448,1093275.480,649.193,CP				

- ii. Data shall be in US State Plane Coordinates System, Illinois East zone, NAD-83, NAVD-88, US Survey Feet, as opposed to an arbitrary coordinate system.

The Contractor shall call attention to deviations in the original Plans and original CAD file by drawing a “cloud” around specific locations.

In addition to the final submittal of record drawings, the Contractor shall submit an up to date record drawing when the project has reached 50% completion and/or following completion of underground utility construction.

The cost associated with required submittals shall be considered as included in the contract unit prices bid for the various items involved.

FENCING AND STOCKPILING (VOG)

No open trench or pit shall remain unprotected. It is the Contractor's responsibility to backfill the trench and/or pit or erect a stable and secure six (6) foot high chain link fence around the perimeter of excavation, along with a steel plate over the excavation to prevent any access to the excavation without the Contractor's permission.

All excess excavated material and delivered material from the installation of utilities and/or road shall be removed and disposed of off-site the same day. Contractor is not allowed to stockpile more than 5 cubic yards of material overnight. If any material stockpiles will remain overnight higher than two (2) feet, it is the Contractor's responsibility to erect a stable and secure six (6) foot high chain link fence around the perimeter of the stockpiled material. These fences shall be installed and gate/s locked at all times except when access by the Contractor is required.

The cost associated with the job-site safety, trench/pit and stockpile protection shall be considered as included in the contract unit prices bid for the various items involved.

STATUS OF UTILITIES (D-1)

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.

Stage 1

No conflicts to be resolved.

Stage 2

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Sta. 113+26, 62' LT	Electric	Pedestal Removal	ComEd	90 Days
Sta. 208+94, 50' LT	Electric	Aerial Pole Removal		
Sta. 210+23, 60' LT	Electric	Aerial Pole Removal		
Sta. 210+80, 41' LT	Electric	Aerial Pole Removal		
Sta. 212+10, 39' LT	Electric	Aerial Pole Removal		
Sta. 213+45, 37' LT	Electric	Aerial Pole Removal		
Sta. 214+75, 36' LT	Electric	Aerial Pole Removal		
Sta. 216+03, 36' LT	Electric	Aerial Pole Removal		
Sta. 216+19, 265' LT	Electric	Aerial Pole Removal		
Sta. 216+23, 87' LT	Electric	Aerial Pole Removal		
Sta. 217+28, 47' RT	Electric	Aerial Pole Removal		
Sta. 217+29, 35' LT	Electric	Aerial Pole Removal		
Sta. 218+48, 33' LT	Electric	Aerial Pole Removal		
Sta. 208+94 to 219+75, LT	Electric	Aerial Cable Removal		
Sta. 217+30	Electric	Aerial Cable Removal		

Sta. 105+03 to 109+67, RT	Electric	HDPE Duct Installation	ComEd	See previous page
Sta. 206+79 to 218+48, LT	Electric	Concrete Encased PVC Duct Installation		
Sta. 207+21	Electric	HDPE Duct Installation		
Sta. 213+05	Electric	HDPE Duct Installation		
Sta. 216+65	Electric	HDPE Duct Installation		
Sta. 210+76, 58' LT	Electric	Switch Gear Installation		
Sta. 211+00, 58' LT	Electric	Transformer Installation		
Sta. 216+33, 54' LT	Electric	Transformer Installation		
Sta. 216+48, 61' LT	Electric	Switch Gear Installation		
Sta. 216+99, 38' RT	Electric	Transformer Installation		
Sta. 217+30, 52' LT	Electric	Aerial Pole Installation		
Sta. 218+48, 35' LT	Electric	Aerial Pole Installation		
Sta. 217+30, LT	Electric	Aerial Cable Installation		
Sta. 218+48 to 219+75, LT	Electric	Aerial Cable Installation		
Sta. 111+66, 41' LT	Electric	Light Pole Removal		
Sta. 112+18, 40' RT	Electric	Light Pole Removal		
Sta. 112+92, 41' LT	Electric	Handhole Removal		
Sta. 112+92, 41' LT	Electric	Light Pole Removal		
Sta. 113+54, 39' RT	Electric	Light Pole Removal		
Sta. 114+25, 42' LT	Electric	Light Pole Removal		
Sta. 114+92, 41' RT	Electric	Light Pole Removal		
Sta. 115+63, 40' LT	Electric	Light Pole Removal		
Sta. 116+99, 38' LT	Electric	Light Pole Removal		
Sta. 117+62, 41' RT	Electric	Light Pole Removal		
Sta. 118+45, 40' LT	Electric	Light Pole Removal		
Sta. 119+13, 41' RT	Electric	Light Pole Removal		
Sta. 119+78, 40' LT	Electric	Light Pole Removal		
Sta. 211+08 to Sta. 220+41, LT	Underground Telephone	Cable Relocation	AT&T Distribution	90 Days
Sta. 217+23	Underground Telephone	Cable Installation		

Sta. 211+08, 40' LT	Underground Telephone	Handhole Removal	AT&T Distribution	See previous page
Sta. 211+08, 64' LT	Underground Telephone	Handhole Installation		
Sta. 214+75, 37' LT	Underground Telephone	Pedestal Removal		
Sta. 214+75, 49' LT	Underground Telephone	Handhole Installation		
Sta. 111+16 to Sta. 113+39 LT	Underground Fiber Optic Cable	Cable Installation	Astound/RCN	42 Days
Sta. 113+39	Underground Fiber Optic Cable	Cable Installation		
Sta. 210+24 to 219+75, LT	Underground Fiber Optic Cable	Cable Installation		
Sta. 211+04, 44' LT	Underground Fiber Optic Cable	Pedestal Installation		
Sta. 213+009, 42' LT	Underground Fiber Optic Cable	Handhole Installation		
Sta. 214+52, 39' LT	Underground Fiber Optic Cable	Pedestal Installation		
Sta. 216+58, 44' LT	Underground Fiber Optic Cable	Pedestal Installation		
Sta. 217+30, 45' LT	Underground Fiber Optic Cable	Node Cabinet Installation		
Sta. 217+35, 45' LT	Underground Fiber Optic Cable	Power Supply Cabinet Installation		
Sta. 217+40, 45' LT	Underground Fiber Optic Cable	Handhole Installation		
Sta. 212+13 to 220+38, LT	Underground Cable	Aerial Cable Removal	Comcast	98 days
Sta. 212+10 to 220+38, LT	Underground Cable	Cable Installation		
Sta. 217+27, LT & RT	Underground Cable	Cable Installation		
Sta. 212+13, 45' LT	Underground Cable	Vault Installation		

Sta. 217+27, 48' LT	Underground Cable	Vault Installation	Comcast	See previous page
Sta. 218+45, 35' LT	Underground Cable	Vault Installation		
Sta. 219+16, 37' LT	Underground Cable	Vault Installation		
Sta. 110+84 to 115+43, LT	Underground Gas Main	Gas Main Relocation	Nicor	14 days
Sta. 210+38 to 213+21, LT	Underground Gas Main	Gas Main Relocation		
Sta. 106+85, 40' LT	Underground Fiber Optic Cable	Handhole Removal	Lumen	Completed
Sta. 109+76, 68' RT	Underground Fiber Optic Cable	Handhole Removal		
Sta. 112+70, 53' RT	Underground Fiber Optic Cable	Manhole Removal		
Sta. 105+18 to 108+77, RT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 108+77	Underground Fiber Optic Cable	Cable Relocation		
Sta. 108+77 to 117+95, LT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 117+95	Underground Fiber Optic Cable	Cable Relocation		
Sta. 117+95 to 118+09, RT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 105+18, 34' RT	Underground Fiber Optic Cable	Handhole Installation		
Sta. 108+77, 47' LT	Underground Fiber Optic	Handhole Installation		
Sta. 113+90, 50' LT	Underground Fiber Optic Cable	Handhole Installation		
Sta. 117+96, 38' RT	Underground Fiber Optic Cable	Handhole Installation		

Sta. 117+96, 47' LT	Underground Fiber Optic Cable	Handhole Installation	Lumen	See previous page
Sta. 109+57, 72' RT	Underground Fiber Optic Cable	Handhole Removal	MCI/Verizon	19 Days
Sta. 111+54 to 111+74, LT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 112+91 to 113+11, RT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 113+85 to 114+05, RT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 114+22 to 114+42, RT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 117+05 to 117+25, RT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 210+12 to 219+75, LT	Underground Fiber Optic Cable	Cable Installation		
Sta. 217+20	Underground Fiber Optic Cable	Cable Installation		
Sta. 211+93 to 212+13, RT	Underground Fiber Optic Cable	Cable Relocation		
Sta. 217+14, 31' RT	Underground Fiber Optic Cable	Handhole Installation		
Sta. 217+29, 43' LT	Underground Fiber Optic Cable	Handhole Installation		
Sta. 111+20, 42' RT	Underground Fiber Optic Cable	Handhole Vertical Adjustment		
Sta. 203+33 to 214+14, RT	Underground Telephone	Cable Installation	AT&T Teleport	21 Days
Sta. 203+33, 41' RT	Underground Telephone	Handhole Installation		
Sta. 214+14, 42' RT	Underground Telephone	Handhole Installation		

Sta. 110+61 to 118+88, LT	Underground Telephone	Cable Installation	AT&T Teleport	See previous page
Sta. 118+88, 42' LT	Underground Telephone	Handhole Installation		
Sta. 208+85, 42' RT	Underground Telephone	Manhole Vertical Adjustment		
Sta. 208+78, 42' LT	Underground Telephone	Manhole Vertical Adjustment		

Stage 3

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Sta. 214+07, 44' LT	Underground Gas Main	Gas Valve Vertical Adjustment	Nicor	1 Day

Stage 4

No conflicts to be resolved.

Stage 5

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	DURATION OF TIME
Sta. 209+10, 46' LT	Underground Gas Main	Gas Valve Vertical Adjustment	Nicor	5 days
Sta. 209+23, 60' LT	Underground Gas Main	Gas Valve Vertical Adjustment		
Sta. 210+28, 46' LT	Underground Gas Main	Gas Valve Vertical Adjustment		
Sta. 210+38, 45' LT	Underground Gas Main	Gas Valve Vertical Adjustment		
Sta. 106+03, 23' LT	Underground Gas Main	Gas Valve Vertical Adjustment		

Stage 1: 0 Days Total Installation
 Stage 2: 374 Days Total Installation
 Stage 3: 1 Days Total Installation
 Stage 4: 0 Days Total Installation
 Stage 5: 5 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 – Distribution	Robert Palumbo	(847) 703-0715	rp1393@att.com
AT&T - Teleport	Jason Sterenberg	(708) 240-9085	jsterenberg@networkconnex.com
Comcast	Thomas Munar	(224) 229-5851	thomas_munar@comcast.com
ComEd	Nathan Onchuck	(779) 231-3026	nathan.onchuck@comed.com
Lumen	Katherine Waltz	(312) 253-1800	kwaltz@hbkengineering.com
MCI/Verizon	Kendrick Lomax	(312) 612-5216 x209	klomax@telecom-eng.com
Nicor	Nicholas Groselak	(630) 388-3612	x2ngrose@southernco.com
Astound/WOW	Marvin Hazley	(630) 631-2594	marvin.hazley@astound.com

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

No facilities requiring extra consideration.

Stage 1

No facilities requiring extra consideration.

Stage 2

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER
Sta. 117+50, 48' RT	Underground Fiber Optic Cable	Watch line during installation of proposed valve vault	MCI/Verizon

Stage 3

No facilities requiring extra consideration.

Stage 4

No facilities requiring extra consideration.

Stage 5

No facilities requiring extra consideration.

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 – Distribution	Robert Palumbo	(847) 703-0715	rp1393@att.com
AT&T - Teleport	Jason Sterenberg	(708) 240-9085	jsterenberg@networkconnex.com
Comcast	Thomas Munar	(224) 229-5851	thomas_munar@comcast.com
ComEd	Axl Davis	(779) 231-2969	axl.davis@comed.com
Lumen	Katherine Waltz	(312) 253-1800	kwaltz@hbkengineering.com
MCI/Verizon	Kendrick Lomax	(312) 612-5216 x209	klomax@telecom-eng.com
Nicor	Nicholas Groselak	(630) 388-3612	x2ngrose@southernco.com
Astound/WOW	Marvin Hazley	(630) 631-2594	marvin.hazley@astound.com

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.

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.”

AVAILABLE REPORTS (D1 LR)

Effective: July 1, 2021

☐ No project specific reports were prepared.

When applicable, the following checked reports and record information is available for Bidders' reference upon request:

- ☐ Record structural plans
- ☒ Preliminary Site Investigation (PSI) (IDOT ROW)
- ☒ Preliminary Site Investigation (PSI) (Local ROW)
- ☒ Preliminary Environmental Site Assessment (PESA) (IDOT ROW)
- ☒ Preliminary Environmental Site Assessment (PESA) (Local ROW)
- ☒ Soils/Geotechnical Report
- ☐ Boring Logs
- ☐ Pavement Cores
- ☐ Location Drainage Study (LDS)
- ☐ Hydraulic Report
- ☐ Noise Analysis
- ☐ Other:

Those seeking these reports should request access from:

Ms. Adrianna Webb
Village of Glenview
2500 East Lake Avenue
Glenview, IL 60026
847.904.4400
awebb@glenview.il.us

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
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/}

Use	Mixture	Aggregates Allowed	
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		
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>

Use	Mixture	Aggregates Allowed	
		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 BINDER AND SURFACE COURSE (D1)

Effective: November 1, 2019

Revised: April 1, 2026

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

"The amount of HMA binder course placed shall be limited to that which can be surfaced during the same construction season."

Revise the fifteenth through eighteenth paragraphs of Article 406.14 of the Standard Specifications to read:

"The mixture used in constructing acceptable HMA test strips will be paid for at the contract unit price. Unacceptable HMA test strips shall be removed and replaced at no additional cost to the Department."

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, SMA 9.5 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 steal 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 and may add these materials 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 Quality Control Limits table in Article 1030.09(c) 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 3.2 to 4.8 percent.

3/ Allowable limit below minimum design VMA requirement.

Revise Article 1030.09(g)(1) of the Supplemental Specifications with the following:

“(1) The Contractor shall sample approximately 200 lb (91 kg) of mix as required for the Department’s random mixture verification tests according to Article 1030.09(h)(1).”

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).”

Revise the second sentence of Article 1030.09(h)(1) of the Supplemental Specifications with the following:

“The random verification mixture sampling interval will be a maximum of 3,000 tons (2,720 metric tons). The Engineer will randomly identify one sample per interval, with a minimum of one sample per mix. If the remaining mix quantity is 600 tons (544 metric tons) or less, the quantity will be combined with the previous interval in the

Engineer's random sample identification. If the required tonnage of a mixture for a single pay item is less than 250 tons (225 metric tons) in total, the Engineer will waive mixture verification sampling and testing."

Revise the third paragraph of Article 1030.09(h)(1) of the Standard Specifications to read:

"If comparisons of the mixture verification test results are outside the above limits of precision, the Department will verify the results by testing the retained split sample. The retest results will replace all the original results."

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 (G_{mm}) 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 Gmb.”

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. To be considered acceptable to remain in place, the Department’s mixture test results shall meet the acceptable limits stated in Article 1030.09(i)(1). In addition, no visible pavement distress such as, but not limited to, segregation, excessive coarse aggregate fracturing outside of growth curves, excessive dust balls, or flushing shall be present as determined by the Engineer.”

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

Effective: January 1, 2019

Revised: January 1, 2026

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, 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.

In the Supplemental Specifications, replace the addition of the paragraph between the third and fourth paragraphs of Article 1030.10 with the following:

“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.”

Replace the eleventh paragraph of Article 1030.10 of the Standard Specifications with the following:

“If an initial Hamburg wheel or I-FIT test fails to meet the requirements of Article 1030.05(d), the Department will verify the results by testing the retained gyratory cylinders. Upon notification by the Engineer of a Hamburg wheel or I-FIT test failure on the retained gyratory cylinders, the Contractor shall substitute an approved mix design, submit a new mix design for mix verification testing according to Article 1030.05(d), or pave 250 tons with or without an adjustment and resample for Department Hamburg wheel and I-FIT testing as directed by the Engineer. Paving may continue as long as all other mixture criteria is being met. If Hamburg wheel or I-FIT tests on the resampled HMA fail, production of the

affected mixture shall cease and the Contractor shall substitute an approved mix design or submit a new mix design for mix verification testing according to Article 1030.05(d)."

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."

MINERALIZED CARBON DIOXIDE CONCRETE (D-1)

Effective: January 1, 2026

Description. This work shall consist of the proportioning, mixing, placement, curing, and evaluation testing of portland cement concrete that utilizes an admixture which promotes carbon dioxide (CO₂) mineralization or an equivalent effect at the Contractor's option.

Materials. Materials shall be according to the following.

<u>Item</u>	<u>Article/Section</u>
(a) Portland Cement Concrete (Note 1)	1020
(b) Concrete Admixtures (Note 2)	1021

Note 1: Concrete shall meet the requirements of Class SI concrete used for the construction of curb and gutter, driveways, sidewalks and other applications as allowed by the Engineer. However, the mix design cement content shall be reduced by 3 to 6 % and an admixture which promotes CO₂ mineralization, or an equivalent effect shall utilized.

Note 2: The admixture which promotes CO₂ mineralization, or an equivalent effect shall be food grade quality from a nearby supplier. In addition, it 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. Testing according to AASHTO M 194 and other testing if required by the Engineer shall be by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete. Test data required to be submitted to AASHTO Product Eval and Audit according to Article 1021.01 and other testing data, if required by the Engineer, shall be submitted 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.

Mix Design Verification and Evaluation. The mineralized CO₂ concrete mix design will be verified by the Engineer. Verification of a mix design shall in no manner be construed as acceptance of any mixture produced.

Equipment. Equipment shall be according to applicable portions of Sections 420, 424, 483, and 606; except special equipment needed for production of mineralized CO₂ concrete shall be approved by the Engineer.

Construction Requirements. Construction requirements shall be according to applicable portions of Sections 420, 424, 483, and 606.

The placement locations for the mineralized CO₂ concrete shall be according to the plans or as directed by the Engineer.

The same mixture proportions shall be used for the entire project, unless otherwise stated in the project documents. If during the project there is a change in the type or source of the cement, finely divided minerals, aggregates, or CO₂ mineralization admixture; the mixing shall be suspended, and a new mix design shall be developed, and re-verified.

The cost of this work shall be included in the contract unit price of the PCC pay item involved.

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."

SAW CUTTING

The Contractor shall saw cut pavement, curb and gutter, medians, driveways, sidewalk, and patches to separate the existing material to be removed by means of an approved concrete saw to a depth as shown on the plans or as directed by the Engineer. This work shall be included in the cost of the item being removed.

The Contractor shall be required to saw vertical cuts so as to form clean vertical joints. Should the Contractor deface any edge, a new sawed joint shall be provided and any additional work, including removal and replacement, shall be done at the Contractor's expense.

PROTECTION OF TREES (VOG)

This work shall be done in accordance with Section 201 of the Standard Specifications, except as modified herein.

All tree protection (temporary fence installation) shall be completed before construction operations commence in any area. Every effort shall be made by the Contractor when working near trees and shrubs to preserve same from harm. No trees or shrubs shall be removed unless indicated on the Plans or as determined in the field by the Engineer. The Contractor shall be responsible for damage to or loss of any tree or shrub not specifically designated to be removed.

Wherever trees which are not permitted to be removed interfere with normal excavation procedures, the following shall govern. No machine excavation shall be made within a distance of three trunk diameters or 12 inches (whichever is greater) of any tree, and no roots over 2 inches in diameter shall be cut unless, in the opinion of the Engineer, it is impossible to complete the work without cutting. Excavation closer than three trunk diameters or 12 inches (whichever is greater) from any tree shall be made by hand, and the tree shall be tunneled where necessary as determined by the Engineer.

Damage to tree limbs shall be held to a minimum. Shrubs and tree limbs shall be tied back wherever necessary to prevent their loss or damage. Wherever damage by construction equipment to limbs and branches is unavoidable, they shall be pruned before starting work and sealed in accordance with best forestry practice.

Wherever necessary, the Contractor shall provide plank wrappers wired in place to protect the trunks from being damaged by trench machinery, tractors or trucks. Protective planking shall be removed as soon as practical after the work in the vicinity has been completed. In removing spoil banks from around trees, hand work will be required as necessary to prevent damage to the trunks by construction machinery.

Small trees (less than 4 inches in diameter) and shrubs which are removed or severely damaged during construction shall be replaced in kind and size by the Contractor. Trees larger than 1-inch in diameter shall be furnished balled and burlapped. The Contractor shall have the option of removing and replanting existing small trees and shrubs in the construction zone in lieu of replacement from new stock. All plantings shall be thoroughly watered at the time of planting and thereafter as required. All replacement plantings shall be according to Article 201.07 of the Standard Specifications.

Damages at the rate of one hundred dollars (\$100.00) per inch of trunk diameter shall be charged against the Contractor for unauthorized removal or destruction of any tree 4 inches in diameter or larger. No penalty will apply for removal of trees where removal is indicated on the Plans or determined by the Engineer.

No pruning of tree limbs or branches and/or roots will be allowed without the written permission from the Engineer. If pruning is necessary and approved, it will be done by an approved licensed landscape contractor, if the Engineer deems it is necessary. The Contractor shall contact the Engineer at least 24 hours prior to his need to prune. The

Contractor shall have available for use a small type backhoe (wheel tractor, 4-wheel combination loader front backhoe) for excavation around trees and utilities. The Contractor shall use the smaller equipment in tight areas of construction if so determined by the Engineer.

This work shall be paid for by the various tree protection items included in the contract.

MEDIAN REMOVAL PARTIAL DEPTH

Description. This work shall consist of the removal of the surface of existing corrugated concrete medians with a self-propelled milling machine necessary to establish temporary pavement for traffic control. All work shall be performed in accordance with Section 440 of the Standard Specifications.

Equipment. Grinding operations will utilize diamond blades mounted on a self propelled machine designed for grinding and texturing pavement. The equipment shall be such that it will not cause strain or damage to the underlying surface of the pavement. Grinding equipment that causes ravels, aggregate fractures, spalls, or disturbance to the transverse or longitudinal joints will not be permitted. Vacuuming equipment for removal of residue and excess water shall be used. The equipment will have a positive means of extracting the slurry material from the pavement and for preventing dust from escaping into the air.

Construction. This work shall consist of grinding and texturing the entire surface of the median in a longitudinal direction. The area ground shall not be left slick or polished. The ground surface shall be of uniform texture.

Grinding shall be discontinued when there is danger of water freezing.

For multiple passes, the equipment shall be carefully controlled to minimize the overlap. Overlaps shall not exceed approximately 1 inch.

Grinding shall result in a parallel corduroy type texturing consisting of grooves between 2 millimeters and 3 millimeters wide. The distance between grooves shall be between 2 millimeters and 3 millimeters. The peaks of the ridge shall average approximately 2 millimeters higher than the bottom of the grooves. The finished texture shall be uniform.

Removal of all slurry or residue resulting from the grinding operations shall be continuous and shall not be deposited on the slab or shoulder. Pavement and paved shoulders must be left in a clean condition.

Disposal of grinding residue shall meet the following requirements:

- 1) At no time will the grinding residue be allowed to enter a closed drainage system. The Contractor is responsible for providing suitable means to restrict the infiltration of the grinding residue into the closed drain system at no additional cost.
- 2) The Contractor will be responsible for hauling the grinding residue to a suitable location at no additional cost.

- 3) Residue will not spread within 100 feet of any natural stream or lake.
- 4) The spread rate will not generate surface runoff. The Contractor will haul the grinding residue to a suitable location when surface runoff occurs at the grinding location at no additional cost.
- 5) Residue shall not be permitted to flow across lanes occupied by public traffic.

The Contractor shall obtain approval of the spreading/disposal method from the Engineer prior to beginning the grinding operation.

Method of Measurement. This item of work will be measured for payment in place and the area computed in square feet.

Basis of Payment. This work will be paid for at the contract unit price per square foot for MEDIAN REMOVAL PARTIAL DEPTH.

GATE VALVE AND VAULT INSTALLATION (VOG)

Description. This work shall consist of the furnishing and installation of valves and/or valve vaults as shown on plans in accordance with Section 602 of the Standard Specifications and Section 42 of "Standard Specifications for Water and Sewer Construction in Illinois", latest edition and VGES detail (U-15).

Valve Vaults shall be precast reinforced concrete, eccentric type, with a minimum sixty (60) inch inside diameter barrel section. Barrel sections shall be sealed using a butyl rubber or bituminous mastic material strip. Eccentric cone sections shall be used. Steps shall be made of steel reinforced plastic, using an approved plastic meeting ASTM D4101, Type II, Grade 49108, over a #3 grade 60 ASTM reinforcing bar.

Valves shall be right-hand closing resilient wedge gate valves, in accordance to the Village of Glenview's Standards. Valve sizing shall be as indicated on the plans.

Acceptable Resilient Wedge Gate Valve Manufacturer includes Mueller, Clow, Waterous, or U.S. Pipe.

Valves shall be located within the vault such that the operating nut is centered to the frame and a minimum of twelve (12) inch clearance be maintained from the vault floor to the bottom of water main pipe.

Only external lifting holes shall be allowed on concrete barrel sections for all structures. Fully penetrating lifting holes are not allowed. All lifting holes in the concrete barrel sections shall be sealed with mortar after structure installation.

Frames and covers are to be Type 1. Valve Vault covers must have "Water" cast into the top of the cover. Valve Vault frames and covers shall be considered included in this pay item.

Final adjustment of frame and cover elevation (prior to placement of final hot-mix asphalt course), frame, adjusting ring stabilization/sealing and ten (10) inch thick concrete apron construction (in paved areas) shall be considered included in the appropriate "Water Valve" contract unit price.

Plastic adjustment rings shall be used at all locations. Plastic adjustment ring supply and installation shall be considered included in the valve vault installation cost.

Work shall include valve, fittings, any capping of live or abandoned water main, vault delivery and installation, all saw-cutting, excavation, supply and compaction of aggregate trench backfill, any mortaring required around pipes, adjustment rings, sections and frames as required, and disposal of excess material.

Trench Backfill shall be considered included in the contract unit prices and will not be paid separately, per the specification for TRENCH BACKFILL CLARIFICATION.

Removal of existing valve vaults shall be in accordance with Section 605 of the Standard Specifications.

Basis of Payment. This work shall be paid for at the contract unit price per each WATER VALVES of the gate valve size specified, which price shall be payment in full for labor, materials, and equipment to complete the work as specified herein and as shown on plans. Valve vaults shall be paid for separately as VALVE VAULTS, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID. Removal of existing valve vaults shall be paid for separately as VALVE VAULTS TO BE REMOVED.

ADJUSTING WATER MAIN

Description. This work shall consist of adjusting existing water mains when directed by the Engineer where they are in conflict with the proposed storm sewer or sanitary sewer. This item shall only be used on the existing watermain and shall not be allowed for adjusting the proposed watermain.

All materials used in adjusting the existing water mains shall meet the requirements of the special provisions "Water Main Installation". All adjustment in the line or grade of the existing water main shall be approved by the Engineer.

All materials, labor, and equipment necessary to adjust the water main shall be on hand before shutdown and cutting of the existing main. The Contractor shall take every precaution to hold the interruption of service to a minimum.

A minimum clearance of eighteen inches (18") shall be maintained between the adjusted main and improvement for which the adjustment was made. A downward adjustment will be required unless 5.5' of cover can be maintained for an upward adjustment or as approved by the Engineer.

Adequate precautions shall be taken to prevent contaminants from entering the existing main. The inside surface of all new materials used in the adjustment shall be cleaned of all foreign materials and swabbed with a solution of efficient bactericide before assembly. The adjusted section shall then be flushed with potable water.

Thrust blocking of Class SI concrete shall also be placed where required and as directed by the Engineer.

Forty-eight (48) hours prior to shutting down the existing main for the adjustments, the facility owner and all users that will be affected shall be notified in writing. The Contractor shall distribute notices of the shut down to the residents affected. The Contractor shall cooperate with the local agency personnel to locate valves necessary to isolate the work area. All valves will be operated by personnel from the owning agency.

Method of Measurement. Adjusting water main (of the diameters specified) will be measured per foot in place. Water mains shall be measured along the center line of the water main from the center of the valve to the center of the valve, fittings, or end of the pipe.

Basis of Payment. This work will be paid for at the contract unit price per foot for ADJUSTING WATERMAIN of the size specified. This price shall include the cost of all excavation, materials, pipe, adapters, joint materials, fittings, blocking, backfill, trench backfill, removal and disposal of existing main, and all work and equipment necessary to make a complete and finished installation.

FIRE HYDRANTS TO BE ADJUSTED

Description. This item consists of vertical adjustment of fire hydrants where called for on the plans or as directed by the Engineer. The construction of water mains and appurtenances shall conform to Section 561 and 564 of the Standard Specifications for Road and Bridge Construction and the Standard Specifications for Water and Sewer Main Construction in Illinois, current edition.

Construction Methods. Where called for on the plans or as directed by the Engineer, fire hydrants with auxiliary valves shall be vertically adjusted to meet the proposed final grade. Adjusted fire hydrants shall conform to the clearance and height requirements of the Village's standard depths.

Any fire hydrant or auxiliary valve and valve box damaged by the Contractor shall be repaired at his/her own expense.

The work shall be performed in a manner approved, written or orally, by the Engineer. Extensions and parts shall be from the same manufacturer as the existing fire hydrant, unless otherwise approved by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price each for FIRE HYDRANTS TO BE ADJUSTED, which price shall include all labor, equipment and material necessary to complete the work as specified herein.

FIRE HYDRANT TO BE REMOVED (VOG)

Description. This work shall consist of the removal of existing fire hydrants and auxiliary valves and valve boxes at the locations shown on the plans or directed by the Engineer. The removed material shall be delivered to the Village's Public Works yard if requested by the Engineer. The remaining 6 inch water main lateral shall be capped if the lateral is shown to be abandoned. When a new hydrant and lead is shown to be installed, the existing water main shall be removed to the existing tee.

The ends of any abandoned water main section shall be sealed with a minimum twelve (12) inch long non-shrink concrete or mortar plug in a manner satisfactory to the Engineer.

Work shall include all excavation, disposal of excavated material and removed pipes, capping of six (6) inch water pipe lateral, granular trench backfill and right-of-way restoration.

Trench Backfill shall be considered included in the contract unit prices and will not be paid separately.

Basis of Payment. This work shall be paid for at the contract unit price per each for FIRE HYDRANTS TO BE REMOVED, which price shall be payment in full for performing all work as specified.

FIRE HYDRANT WITH AUXILIARY VALVE INSTALLATION (VOG)

Description. This work shall consist of the furnishing and complete installation of new fire hydrant with auxiliary valve and auxiliary boxes with valve box stabilizer as shown in VGES detail (U-22). The locations indicated on the plans for fire hydrants are approximate. Fire hydrant locations shall be staked by the Contractor and approved by the Engineer prior to installing water main fitting (tee) for the fire hydrant. The Contractor shall utilize the existing watermain fitting (tee) unless otherwise shown on the plans or directed by the Engineer. When existing tees are used, all of the existing bolts shall be removed and replaced with high strength, low alloy steel weathering steel T-bolts.

This work shall be constructed in accordance with the applicable sections of the "Standard Specifications for Water and Sewer Construction in Illinois", all Local Codes and Ordinances, and as specified herein. The proposed hydrants shall meet or exceed UL/FM and AWWA standards.

The usage of the following fire hydrants is acceptable to the Village of Glenview:

Clow Medallion F-2545 with 6" MJ shoe; Main valve opening of five and one fourth (5 ¼) inches, two (2) four and one half (4 ½) inch port nozzles with ninety degree (90°) spread between nozzles and National Standard threads, and have a minimum of six (6) foot depth of bury. Stainless Steel Nuts and bolts throughout the hydrant.

Mueller Super Centurion 200 A-425 Fire Hydrant – with 6" MJ shoe; main valve opening of five and one fourth inch (5 ¼"); and two (2) - four and one half inch (4 ½") port nozzles with ninety (90°) degree spread between nozzles and National Standard threads, and have a minimum of six (6) foot depth of bury. Stainless Steel nuts and bolts throughout the hydrant.

Hydrants shall be painted with Rustoleum Oil Based Enamel, Safety Yellow No. 7644.

Bottom flange of hydrants shall be a minimum of 2" above finish grade and a maximum of 4" above finish grade.

Each fire hydrant shall be supplied with a six (6) inch auxiliary valve (resilient wedge gate valve conforming to Village Standards) and cast iron valve box of adjustable type with stabilizer and cover marked "WATER". The valve box shall be set vertically with the top of the box flush with the finished grade elevation. The fire hydrant shall be placed a minimum of five (5) feet from the edge of the pavement on non-curbed streets or five (5) feet from the back of curb on curbed streets. The hydrant shall be set on precast concrete blocks capable of supporting the same. The back of the hydrant shall be securely braced with thrust block against undisturbed earth. The hydrant backfill (around drain holes) shall be coarse aggregate CA 7 crushed coarse aggregate, with no fines, to an elevation of 2 feet below and above the water main as indicated in the standard Hydrant detail. The backfilled stone shall be covered with a four (4) mil thick plastic sheet or pre-approved geotextile fabric. All hydrants, valves and piping shall be designed for one hundred fifty (150) psi working pressure.

No additional compensation to the Contractor for any hydrant extension/adjustment due to increase in depth (up to eight feet) or decrease in depth (less than five feet) will be allowed by the Village.

Fire hydrant installation work shall include labor, materials (fire hydrant, auxiliary gate valve, auxiliary box, extension sections w/couplings, concrete supports, plastic fabric, thrust blocks, aggregate backfill, removal and disposal of excavated material) for a complete fire hydrant installation and activation.

Trench Backfill shall be considered included in the contract unit prices and will not be paid separately, per the specification for TRENCH BACKFILL CLARIFICATION.

Basis of Payment. This work shall be paid for at the contract unit price per each for FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX which price shall be payment in full for all work as specified therein and as shown on the plans and details or as directed by the Engineer. Installation of six inch ductile iron lead pipe will be paid for separately as WATER MAIN 6".

DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED

Description. This work shall consist of adjusting existing domestic water service boxes.

Construction Requirements. Boxes shall be adjusted to proposed grade by rotating the upper screw-threaded element, or in a manner meeting approval of the Engineer. The adjustment shall not lift the lower piece off the shutoff valve, and the Contractor shall ensure that the box remains tight fitting to the valve nozzle.

It is anticipated that some water service boxes to be adjusted will require replacement of the top section of the service box. This work will not be paid for separately, but shall be included in the cost of the work.

If it is determined by the Engineer that additional replacement parts are required, including extensions or bottom sections connecting to the existing curb stop, the cost to furnish and install these items shall also be included in this item.

All necessary excavation and trench backfill required to access the various parts of the box shall be included in the cost of this work.

Basis of Payment. This item will be paid for at the contract unit price per each for DOMESTIC WATER SERVICE BOXES TO ADJUSTED.

TRACER WIRE CLARIFICATION (VOG)

Reinforced tracer wire shall be required on all new water mains installed within the Village (regardless of pipe material). Tracer wire supply and installation shall be included in water main pipe installation cost.

Tracer wire for open cut/open ditch shall be a #12 AWG HS-CCS high-strength copper clad steel conductor (HS-CCS), insulated with a 30 mil, high-density, high molecular weight polyethylene (HDPE) insulation, and rated for direct burial use at 30 volts. HSCCS conductor must be at 21% conductivity for locating purposes, break load 380 lbs. minimum. HDPE insulation shall be RoHS compliant and utilize virgin grade material. Insulation color shall meet the APWA color code standard for identification of buried utilities. Tracer wire shall be Copperhead™ HS-CCS HDPE 30 mil.

Tracer wire for directional drilling/boring shall be SoloShot™ (12 AWG) extra-highstrength copper-clad steel conductor (EHS-CCS), insulated with a 45 mil, high-density, high molecular weight polyethylene (HDPE) insulation, and rated for direct burial use at 30 volts. EHS-CCS conductor must be at 21% conductivity for locating purposes; break load will be 1150 lbs. minimum. HDPE insulation shall be RoHS compliant and utilize virgin grade material. Insulation color shall meet the APWA color code standard for identification of buried utilities. Tracer wire shall be Copperhead™ SoloShot™ EHS-CCS HDPE 45 mil.

One wire shall be run along the side of the pipe between the three to six o'clock position

of all new mains and hydrant leads, taped to the pipe a minimum of every 5 feet. The wire shall be brought to grade in a tracer box at each hydrant and also secured to the top (inside) of each valve vault, leaving enough slack in the wire so that it may be pulled out of the valve vault. A magnetized tracer box shall be installed at each new fire hydrant. Locate the box behind the fire hydrant away from the flow of water, within two feet of the hydrant barrel. The box shall be tamper-proof, with cast or ductile iron blue lid with a brass wire harness and external brass connection screw, (Copperhead Industries, LD14-ADJ-B or LDXL36-B in unpaved areas, CD14-B for concrete applications and RB14-B in roadway. Additional tracer boxes may be required at locations to be determined by the Engineer.

All splices in the wire to connect main line tracer wire shall use Copperhead SnakeBite Part #SCB-01-SR. For lateral runs or hydrant leads, connections shall be made with a 3 - way enclosed lug direct bury connector with internal silicone sealant, Copperhead Industries "DryConn" Direct Bury Lug, # 3WB-01. In directional bore operations, splices shall be at valve and fitting locations where excavation is required. If a splice must be done in an unexcavated location, use a wire nut twist connector with restraining cap and internal silicone sealant Copperhead Industries #SCB-01-SR. Connections should be wrapped with heavy-duty electrical tape (minimum three inches each side of connection). Grounding of the tracer wire system at all dead end points completes the needed electrical circuit for accurate locates. Contractor to include a Copperhead™ Anode Part # ANO-14. Installation of one Copperhead SnakeBite™ connector, part # SCB-01-SR, shall be installed at a location to be determined by the Engineer. The connector is provided to splice the factory installed anode tracer wire to the mainline tracer wire. The Copperhead™ Anode described above must be used.

The Contractor is responsible for testing and ensuring the continuity of the tracing wire during installation. The Village will test the integrity of the tracing wire at the end of construction.

Tracer wire supply and installation shall be included in water main pipe installation cost.

TRENCH BACKFILL CLARIFICATION (VOG)

Description. This work shall be performed in accordance with applicable portions of Section 208 of the Standard Specifications and Pipe Installation details shown on the plans. **This special provision shall only apply to the installation of Water Main.**

Materials definition:

1. CA 7- Crushed coarse aggregate-IDOT gradation (Article 1004.01)
2. CA 6- Coarse aggregate compiled of limestone or crushed concrete material-IDOT gradation (Article 1004.01)
3. FA 6- Fine aggregate-IDOT gradation (Article 1003.01)

* Each truck load of material shall be IDOT certified and is subject to a visual inspection from the Engineer before being used. All material can be rejected onsite at the Engineer's discretion.*

Compaction:

The first lift over the pipe shall be compacted to not less than ninety percent (90%) and the balance to a minimum of ninety five percent (95%) of the standard laboratory density (AASHTO T-99).

Construction

- **Utility Trench (except water main) in Non-Paved Area:** A non-paved area shall be defined as an area in the parkway outside of the pavement zone of influence. The pavement zone of influence shall be five (5) feet from the edge of pavement on non-curbed streets or five (5) feet from the back of curb on curbed streets. Backfill material shall consist of CA 7 as trench bedding and CA 7 extending up to twelve (12) inches above the top of pipe. The next layer shall be FA 6 extending up to twelve (12) inches from finished grade elevation. The top twelve (12) inches shall be backfilled with eight (8) inches of select backfill material and four (4) inches of topsoil. All backfill shall be properly compacted.
- **Utility Trench in Pavement Area:** A pavement area shall be defined as an area in the pavement or within the pavement zone of influence. The pavement zone of influence shall be five (5) feet from the edge of pavement on non-curbed streets or five (5) feet from the back of curb on curbed streets. Backfill material shall consist of CA 7 as trench bedding and CA 7 extending up to twelve (12) inches from finished pavement surface elevation. The top twelve (12) inches shall be backfilled with CA 6. All backfill shall be properly compacted.
- **Water Main Utility Trench:** All water main trenches (pavement area or non-paved area) shall be backfilled with CA 7 as trench bedding and CA 7 extending up to twelve (12) inches from finished pavement surface elevation or finished grade elevation. The top twelve (12) inches shall be backfilled in accordance with backfill specifications for "Utility Trench in Non-Paved Area" or "Utility Trench in Pavement Area." All backfill shall be properly compacted.

Water Service trenches shall be backfilled in accordance with "Utility Trench in Non-Paved Area" and "Utility Trench in Pavement Area."

Clarification of Payments

Aggregate material used for pipe bedding, encasement and trench backfill (up to the pavement surface elevation or 4" below finished grade in parkways) shall not be paid for separately but shall be considered included in the appropriate utility installation work.

The Contractor shall provide tickets to the Engineer indicating the source, quality and quantity in cubic yards of trench backfill material which was delivered to the jobsite.

WATER MAIN INSTALLATION (VOG)

Description. This work shall consist of the furnishing and installation of a water main pipe and fittings, of interior diameter as indicated on the plans or as directed by the Engineer and connections to existing water mains. The methods and procedures used to disconnect the existing water main and services from use and re-connecting to the newly installed water main shall be coordinated with the Village of Glenview Public Works Department and shall be approved by the Engineer. The work shall be constructed in accordance with the applicable

articles of Section 561 of the Standard Specifications, Section 40 and 41 of the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition, and the Village of Glenview's Engineering Standards.

It is Contractor's responsibility to verify on the jobsite, the exact locations and elevations of existing utilities and sewer services before commencing with any water main installation work and coordinate with the Engineer any changes to the proposed water main layout and/or elevation.

Existing utility exploration work is considered as part of water main pipe installation work and will not be paid separately.

Water Main Pipe

Water pipe shall be of the following materials as specified and as approved by the Engineer:

1. Ductile Iron Pipe

Ductile Iron Pipe, Class 52 conforming to ANSI A21.51 (AWWA C-151) latest edition. All pipes and fittings shall have a cement mortar lining conforming to the requirements of ANSI A21.4 (AWWA C104).

A. Joints

On water main pipe, all joints shall be the push-on type where the sections of the water main pipe are connected by means of slip joints, consisting of bells cast integrally with the pipe. The interior angular recesses of the bells shall conform to the shape and dimensions of a single molded rubber seating gasket, as described in ANSI A21.11 (AWWA C-111). The interior dimension of the single molded rubber seat gasket is such that it will admit the insertion of the spigot end of the joining pipe in a manner that will compress the gasket tightly between the bell of the pipe and the inserted spigot thus securing the gasket and sealing the joint. Pipe deviation angle within the joint shall not exceed pipe manufacturer recommendation.

Slip joints shall be any one of the following makes:

1. Super Belltite - As supplied by James B. Clow and Sons
2. Fastite - As supplied by American Cast Iron Pipe and Foundry Co.
3. Tyton - As supplied by U.S. Pipe and Foundry Co.

The lubricant used in conjunction with slip joints shall be that recommended by the suppliers specified above or as approved by the Engineer.

B. Polyethylene Encasement

All water main and fittings shall be encased in high-density cross-laminated polyethylene encasement tubing with its material specifications and installation method in accordance with ANSI A21.5/AWWA 105, ASTM A674, and using "Method A" installation.

The polyethylene encasement shall be secured along the pipe barrel (approximately every three feet) with polywrap tape.

2. PVC Pipe

PVC pipe, Class 150 (DR18) conforming to AWWA C905 requirements (for pipes larger than 12 inches) or AWWA C909 requirements (for pipes 12 inches and smaller). Each pipe and coupling shall carry UL and FM listing labels and be approved by NSF. Pipes provided shall be manufactured with ductile iron outside diameters.

3. Fittings

All fitting shall be ductile iron mechanical joint conforming to AWWA C111/C600 with cement mortar lining as specified under Water Main Pipe and in accordance with ANSI A21.10. All fitting shall be encased in high-density cross-laminated polyethylene encasement. Bolts shall be high strength, low alloy steel weathering steel T-bolt.

Tracer Wire

See the special provision for TRACER WIRE CLARIFICATION.

Construction Requirements:

A. Excavation

The trench shall be excavated so that the water main will be at the depth as shown on the plans and profiles and/or established by the Engineer. The installation depth of the water main shall not be less than six (6) feet from the existing/proposed ground elevation to the top of the pipe, except where shown differently at utility crossings or as directed by the Engineer. If the excavation has been made deeper than necessary, or is required deeper for adjustments for valve vaults, services or for separation from sewers and other utilities, no additional cost shall be charged. The cost of removal of any sections of abandoned (or to be abandoned) utilities (sewer, water main, etc.), which interfere with new water main installation, shall be considered included in "Water Main Installation" unit price item and shall be coordinated with the Engineer.

The trench shall be excavated a minimum of twelve (12) inches wider than the outer diameter of the pipe. The width of the trench shall not exceed the outer diameter of the pipe by more than thirty-six (36) inches. If necessary, bell holes of sufficient depth shall be provided across the bottom of the trench to accommodate the bell of the pipe, providing sufficient room for joint making, and to ensure uniform bearing for the pipe. Where adverse soil conditions warrant such construction, water main trenches shall be stabilized in the manner directed by the Contractor's Structural Engineer (with SE license). All excavated material for the installation of the water main shall be removed and disposed of off-site. The cost associated with the excavated material removal and disposal shall be considered included in "Water Main Installation" unit price item.

B. Sequence of Operations

The Contractor shall coordinate his/her work in a manner that will cause as little inconvenience to traffic as possible. The Contractor shall work closely with the Village Officials, Fire and Police Departments in coordinating interruption to normal traffic flow, access to property, and inconvenience to the public.

Any necessary valve shut down, for the purpose of work on existing water system, shall be done by the Village of Glenview Water Department only. A tentative installation schedule of

operations shall be submitted to the Village seventy two (72) hours before any shut down of the water system can be made. The actual sequence of water main installation shall be discussed and scheduled at a pre-construction meeting with the Contractor, Engineer and Public Works Department.

C. Thrust Blocking

Concrete Thrust Blocks, as shown on the plans and/or directed by the Engineer, shall be constructed at plugs, tees, and bends with three thousand (3,000) psi concrete, in accordance with Section 41-2.09 of the "Standard Specifications for Water & Sewer Main Construction in Illinois", most recent addition and Village of Glenview Standards. The concrete thrust blocks shall completely fill the space between the bends or fittings and the walls of the trench from six (6) inches below the fitting to twelve (12) inches above the fitting with no possible interference with the making or remaking of the joints. In addition to the concrete thrust blocking at all mechanical joints, bends of ten (10) degrees and larger, and fire hydrants shall have a "Megalug" restraint. Megalug installation shall be per manufacturer recommendations. Bolts shall be weathering steel.

D. Trench Backfill

Trench Backfill shall be considered included in the water main installation contract unit price and will not be paid separately, per the specification for TRENCH BACKFILL CLARIFICATION.

E. Water Main Crossing Utilities

Wherever the water main crosses existing utilities (sewer, telephone, electric, gas, etc.), the Contractor shall be responsible for determining the existing location and elevation (grade) of existing utilities to avoid all vertical and horizontal conflicts. The Contractor shall explore and/or uncover said utilities prior to water main and/or water service installation. This existing utility exploration work shall be considered included in WATER MAIN unit price item and at no additional cost to the Village.

F. Water Main Testing

See special provision for WATER MAIN TESTING CLARIFICATION

Method of Measurement. Water main (of the diameters specified) will be measured per foot in place. Water main shall be measured along the centerline of the water main from the center of the valve to the center of the valve, fittings, or end of the pipe.

Basis of Payment. This work, as described above, shall be paid for at the contract unit price per foot for WATER MAIN, of the material and diameter as specified, which price shall be payment in full for labor, material, including all fittings (bends, wyes, tees, megalugs, reducers, plugs, sleeves, etc.), pipe, required water main adjustments due to utility crossings, polyethylene encasement, thrust blocks, tracing cables, bedding, aggregate trench backfill, pressure and leakage testing, chlorination, and equipment required for a complete and operational installation, including the necessary cutting and plugging of existing water mains to be abandoned, crossing under existing utilities, all excavation, removal and disposal off-site of excavated material.

Pavement and driveway removal shall be limited to the width of the proposed water main trench. The cost of saw cutting existing pavement for water main trenches shall be included in the cost of WATER MAIN. The cost for installing temporary CA 6 from the water main trench to the existing pavement elevation shall also be included in the cost of WATER MAIN.

WATER MAIN TESTING CLARIFICATION (VOG)

Hydrostatic Pressure Test

1. When new water main section length exceeds forty (40) feet:

The Contractor is required to make the appropriate temporary field arrangements (caps, blind flange, thrust blocks, etc.) to perform pressure and leakage tests on the water main and fittings installed. The Contractor shall pretest the water main to ensure pressure will be held before scheduling any testing for the Village. Both tests shall be for duration of two hours at one hundred fifty (150) psi pressure. No pressure drop (zero drop) in the water main during the testing is allowed. If unable to successfully pass the required tests, the Contractor shall correct the installation until such test has been successfully completed. After a successful pressure test, chlorination shall be with gas or liquid injection method only in accordance with AWWA C-600 and C603 and the local authority's requirements. The water main shall be chlorinated with an initial concentration of fifty (50) parts per million. The residual concentration after 24 hours shall be no less than twenty five (25) parts per million. After secondary flushing, a minimum of two (2) water samples on two (2) consecutive days, twenty four (24) hour apart, shall be taken and tested by an Illinois Environmental Protection Agency certified laboratory. The sampling procedures set forth by the Illinois E.P.A. shall be followed. The sampling of the main must be completed by Friday at 1:00 p.m. The Village Engineer or his/her representative must be present for the chlorination, flushing and drawing of the sample. The Contractor shall bear the costs of water main pressure test, chlorination and flushing. If, after four samples, the results do not yield two consecutive clear readings, a re-chlorination will be necessary. The water system shall be made operational, only by the Village of Glenview Water Department after receiving confirmation of the, acceptable to the Engineer, pressure and chlorination tests.

2. When new water main section length is less than forty (40) feet:

The requirements and procedures for Testing and Chlorination of new water main sections shorter than 40 feet shall be performed by the Contractor as directed by the Engineer.

Leak Detection

After water main and water service installation is complete, but prior to the new concrete pavement or HMA surface placement, the Contractor is required to perform a water main and water service leak detection survey. The leak detection survey shall incorporate, but is not limited, to all joints, valves, hydrants, water service taps (corporation stops), etc. Water leakage listening distances shall not exceed five hundred (500) feet and survey shall be performed by skilled qualified personnel with modern electronic leakage detecting equipment. The Contractor shall use leakage detecting personnel which has a minimum of three years'

experience in leak detection and correlation. Every suspect leak shall be analyzed and correlated utilizing a computerized leak correlator.

All required water main leak detection survey work shall be conducted during daylight hours when water supply system is pressurized and in regular active condition. Twenty-four (24) hours notification to the Engineer is required if any leak detection work is planned after normal working hours. All survey crews shall consist of a minimum of two personnel which would be adequately trained and familiar with traffic and other safety procedures. As each leak is pin pointed, its location will be marked in the field. The Contractor shall submit to the Engineer a written "Leak Location Form" on the day the leak was pin pointed. This Form shall include a descriptive map of each leak location and an estimated amount of water leakage.

In the event that the water leak detection survey reveal any flawed water main or water service installation work by the Contractor, the defective section of water pipe, joint or fitting shall be exposed and repaired to eliminate any water leakage. All water main and water service leakage test is included in the cost of the water main and/or water service installation work. No additional compensation for water leakage elimination work and the repaired water pipe leakage re-testing will be provided to the Contractor by the Village.

At the conclusion of the water leakage survey, (prior to pavement work), the Contractor shall prepare and submit two copies of a comprehensive report prepared by the leak detection firm. This report will summarize the surveyed section of water main, number and type of leaks found, and the estimated quantity of leakage. This report shall be submitted to the Engineer for final review and determination if any additional water pipe repair work by the Contractor is warranted.

The following water leak detection firms are acceptable to the Village of Glenview:

- Associated Technical Services Ltd., 524 W. St Charles Ave., Villa Park, IL. 60181
- Water Net Survey, 504 Linden Lane, Boone, Iowa 50036
- ADS Environmental Services, 20 North Wacker Drive, Suite 1530, Chicago, IL. 60606
- M. E. Simpson Co. Inc., 3406 Enterprise Ave., Valpariso, Ind. 46384
- Wachs Utility Services, 600 Knightbridge Parkway, Lincolnshire, IL. 60069

Basis of Payment. This work shall be included in the cost of the water main installed or lined as part of the project.

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 3667V-2: Carillon Square – 1412-1500 Waukegan Road, Glenview, Cook County

- Station 113+30 to Station 115+40 (CL Waukegan Road), 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). Contaminants of concern sampling parameters: Iron, Manganese and Nickel.
- Station 115+40 to Station 116+35 (CL Waukegan Road), 0 feet to 65 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.
- Station 116+35 to 119+80 (CL Waukegan Road), 0 to 65 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: Benzo(a)pyrene, Iron, Lead and Manganese.

Sites 3667V-5: Gateway Center – 1410 Waukegan Road, Glenview, Cook County

- Station 111+95 to Station 112+45 (CL Waukegan Road), 0 feet 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). Contaminants of concern sampling parameters: Manganese and Nickel.
- Station 112+45 to Station 113+30 (CL Waukegan Road), 0 feet 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). Contaminants of concern sampling parameters: Iron, Manganese and Nickel.

Site 3667V-6: Bank of America – 1400 Waukegan Road, Glenview, Cook County

- Station 110+20 to Station 111+25 (CL Waukegan Road), 0 feet to 110 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: Manganese.
- Station 111+25 to Station 111+95 (CL Waukegan Road), 0 feet 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). Contaminants of concern sampling parameters: Manganese and Nickel.

Site 3667V-8: Fifth Third Bank – 1529 Waukegan Road, Glenview, Cook County

- Station 118+55 to Station 118+85 (CL Waukegan Road), 0 feet to 60 feet RT. 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.

- Station 118+85 to Station 119+80 (CL Waukegan Road), 0 feet to 60 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 parameters: Benzo(a)pyrene, Manganese and Nickel.

Site 3667V-9: Commercial Building – 1509-1527 Waukegan Road, Glenview, Cook County

- Station 116+30 to Station 118+55 (CL Waukegan Road), 0 feet to 60 feet RT. 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 3667V-10: Huntington Bank – 1441 Waukegan Road, Glenview, Cook County

- Station 114+15 to Station 115+15 (CL Waukegan Road), 0 feet to 60 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, Manganese and Nickel.
- Station 115+15 to Station 116+30 (CL Waukegan Road), 0 feet to 60 feet RT. 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: Iron, Lead, Manganese and Nickel.

Site 3667V-11: Glen Oak Plaza – 1403-1435 Waukegan Road, Glenview, Cook County

- Station 112+50 to Station 112+80 (CL Waukegan Road), 0 feet to 60 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 112+80 to Station 114+00 (CL Waukegan Road), 0 feet to 60 feet RT. 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: Arsenic, Iron and Manganese.
- Station 114+00 to Station 114+15 (CL Waukegan Road), 0 feet to 60 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, Manganese and Nickel.

Site 3667V-12: Commercial Building – 1401 Waukegan Road, Glenview, Cook County

- Station 110+20 to Station 111+70 (CL Waukegan Road), 0 feet 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)(2). Contaminants of concern sampling parameters: Manganese.
- Station 111+70 to Station 112+50 (CL Waukegan Road), 0 feet to 60 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.

Site 3667V-19: Commercial Building – 1701 E. Lake Avenue, Glenview, Cook County

- Station 107+90 to Station 108+15 (CL Waukegan Road), 0 feet to 65 feet LT. 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 108+15 to Station 110+20 (CL Waukegan Road), 0 feet to 110 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: Arsenic, Iron, Manganese and Lead.

Site 3667V-20: Good and Fresh Pizza Bakery – 1334-1338 Waukegan Road, Glenview, Cook County

- Station 107+30 to Station 107+90 (CL Waukegan Road), 0 feet to 65 feet LT. 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.

Site 3667V-21: Pure Balance Health Center – 1332 Waukegan Road, Glenview, Cook County

- Station 107+05 to Station 107+30 (CL Waukegan Road), 0 feet to 65 feet LT. 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.

Site 3667V-22: Arthur Murray Dance Studio – 1328 Waukegan Road, Glenview, Cook County

- Station 105+85 to Station 107+05 (CL Waukegan Road), 0 feet to 65 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: Manganese.

Site 3667V-23: Commercial Building – 1320 Waukegan Road, Glenview, Cook County

- Station 105+25 to Station 105+85 (CL Waukegan Road), 0 feet to 65 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)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Manganese.

Site 3667V-24: Commercial Building – 1310-1318 Waukegan Road, Glenview, Cook County

- Station 104+50 to Station 105+25 (CL Waukegan Road), 0 feet to 65 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)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Manganese.

Site 3667V-27: Lyon Elementary School – 1335 Waukegan Road, Glenview, Cook County

- Station 104+50 to Station 105+60 (CL Waukegan Road), 0 feet to 60 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: Manganese and Benzo(a)pyrene.
- Station 105+60 to Station 107+85 (CL Waukegan Road), 0 feet to 60 feet RT. 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.

- Station 107+85 to Station 110+20 (CL Waukegan Road), 0 feet 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: Manganese.

GZA-SB-2 (Sta. 206+13 to Sta. 207+68).

- 5' below ground surface to bottom of excavation. 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: Total arsenic.

GZA-SB-4 (Sta. 213+37 to Sta. 215+71).

- All excavation. 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: Manganese TCLP and SPLP.

GZA-SB-5 (Sta. 215+71 to end of project).

- All excavation. 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: Manganese Total, TCLP and SPLP.

GZA-SB-6 (Sta. 211+48 to Sta. 213+37).

- Surface to 5 feet below ground surface. 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: Manganese Total, TCLP and SPLP.

GZA-SB-6 (Sta. 211+48 to Sta. 213+37).

- 5 feet below ground surface to bottom of excavation. 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 TCLP and SPLP.

GZA-SB-8 (Sta. 204+08 to Sta. 206+13).

- All excavation. 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 TCLP and SPLP.

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**

REBUILD EXISTING HANDHOLE

Description. This item shall consist of rebuilding and bringing to grade a gas meter vault at a location shown on the plans or as directed by the Engineer. The work shall consist of

removing the handhole frame and cover and the walls of the handhole to a depth of eight (8) inches below the finished grade.

Four (4) holes, four (4) inches in depth and one half (1/2) inch in diameter, shall be drilled into the remaining concrete; one hole centered on each of the four handhole walls. Four (4) #3 epoxy coated steel rebar, eight (8) inches in length, shall be furnished and shall be installed in the drilled holes with a masonry epoxy.

All concrete debris shall be disposed of outside the right-of-way. All rebar must meet the specifications set forth in 1006.10.

The area adjacent to each side of the handhole shall be excavated to allow forming. All steel hooks, handhole frame, cover, and concrete shall be provided to construct a rebuilt handhole according to applicable portions of Section 814 of the Standard Specification. The existing frame and cover shall be replaced if it was damaged during removal or as determined by the Engineer.

Basis of Payment. This work shall be paid for at the contract unit price each for REBUILD EXISTING HANDHOLE, which price shall be payment in full for all labor, materials, and equipment necessary to complete the work described above and as indicated on the drawings.

SHREDDED BARK MULCH

Description. This work shall consist of preparing the ground surface, including removal of any existing vegetation, and furnishing, transporting, and placing a layer of mulch at locations shown on the plans in accordance with the applicable portions of Article 253.11 of the Standard Specifications or as directed by the Engineer.

Mulch required around plants installed as part of this project will not be paid for separately, but shall be included in the cost of the tree, shrub, or perennial planted.

Materials. The mulch shall consist of fine graded shredded tree bark meeting the approval of the Engineer.

Method of Measurement. Mulch will be measured for payment in square yards in place.

Basis of Payment. This work will be paid for at the contract unit price per square yard for SHREDDED BARK MULCH, of the thickness specified. Payment shall be full compensation for all materials including labor, equipment and incidentals to complete the item as shown on the plans and as specified.

BENCH REMOVAL

Description. This work shall include removal of existing benches at the locations noted on the plans. Benches shall be removed and either provided to the Village if requested at the public works facility at 2498 East Lake Avenue or properly disposed of offsite. The bench

and any connecting hardware to the foundation or sidewalk including bolts shall be removed in their entirety.

Basis of Payment. This item will be paid for at the contract unit price per each for BENCH REMOVAL, which payment shall constitute full compensation for removal and disposal of existing benches and accessories, including hardware; and furnishing all materials, labor, equipment, tools, necessary to complete the work as specified.

Removal of the underlying sidewalk or pavers pad shall be paid separately.

TRASH RECEPTACLE RELOCATION

Description. This work shall include removal of existing trash receptacles at the locations noted on the plans. Trash receptacles shall be removed and either provided to the Village if requested at the public works facility at 2498 East Lake Avenue or properly disposed of offsite. The trash receptacle and any connecting hardware to the foundation or sidewalk including bolts shall be removed in their entirety.

Basis of Payment. This item will be paid for at the contract unit price per each for TRASH RECEPTACLE RELOCATION, which payment shall constitute full compensation for removal and relocation or disposal of existing trash receptacles and accessories, including hardware; and furnishing all materials, labor, equipment, tools, necessary to complete the work as specified.

Removal of the underlying sidewalk or pavers pad shall be paid separately.

REMOVE EXISTING WATER VALVE

This work shall be performed in accordance with the applicable portions of Section 561 of the Standard Specifications and Section 42 of the Water and Sewer Specifications.

Description. This work shall include the removal and disposal of existing water valves from within existing valve vaults. When the valve vault is shown to remain, the Contractor shall remove the water valve through the open frame on the structure whenever possible. If the size of the water valve prevents removal through the opening, as determined by the Contractor and approved by the Engineer, the frame and top section of the structure shall be removed in order to provide access to the valve. When the valve is shown to be replaced, after the new valve has been installed, the existing top section and frame shall be reinstalled. The elevation of the frame shall match the proposed surface elevation. This work shall be included in the cost of REMOVE EXISTING WATER VALVE.

When the valve replacement is within the limits of watermain lining, restoration of the ground surface (paved or unpaved) shall be completed as indicated as part of the CURED-IN-PLACE PIPE (CIPP) specification and included in the cost of CURED-IN-PLACE PIPE (CIPP).

The timing, methods and procedures used for temporary disconnection of the existing water main from use for valve removal shall be coordinated and approved by the Engineer. Any necessary valve shut down, for the purpose of work on existing water system, shall be done by Village personnel only.

Basis of Payment. The removal and disposal of existing water valves will be paid for at the contract unit price each for REMOVE EXISTING WATER VALVE, which price shall include all labor, material, disposal and equipment necessary to complete the work.

PLANTER REMOVAL

Description. This work shall include removal of existing planter boxes at the locations noted on the plans.

Planters shall be removed and either provided to the Village, if requested, at the Public Works facility at 2498 East Lake Avenue or properly disposed of offsite. The planter and any connecting hardware to the foundation or sidewalk including bolts shall be removed in their entirety.

Basis of Payment. This item will be paid for at the contract unit price per each for PLANTER REMOVAL, which payment shall constitute full compensation for removal and disposal of existing planters and accessories, including hardware; and furnishing all materials, labor, equipment, tools, necessary to complete the work as specified.

Removal of the underlying sidewalk or pavers pad shall be paid separately.

TEMPORARY BYPASS PUMPING SYSTEM

Description. This work shall consist of supplying, installing, maintaining, and removing temporary watermain bypass lines and service connections required for watermain removed from service for lining operations. This work shall only be performed if it is determined by the Village that a valve closing strategy that maintains service to existing properties is not possible, the Village determines that flow within the project limits needs to be maintained while the main is being lined, if temporary fire hydrants are required by the Village, or if directed by the Engineer.

All bypass line materials and temporary service connections shall conform to Section 40 of the Water and Sewer Specifications and ANSI/NSF 61 Standard.

The bypass mains shall be sized to meet customer demand but in no case less than 4 inch diameter. The Engineer may require that the main size be increased in certain locations to meet customer demand, such as for fire suppression requirements. Temporary by-pass lines shall be looped, supplied by a minimum of two connections to the existing main, unless otherwise approved by the Engineer. Where the ends are at different pressure zones, a check valve shall also be installed. Valves shall be installed in the by-pass in the vicinity of existing mainline valves on the line being cleaned and lined and at such other locations as

the Engineer may direct. The existing watermain shall not be removed from service until the Engineer has approved the installed by-pass line.

The Contractor shall maintain the temporary water service lines in a safe operative condition at all times and shall be responsible for the prevention of injury to persons and damage to property. The Contractor, to the satisfaction of the Engineer, shall provide safeguards, but such provisions shall not relieve the Contractor of full responsibility for the adequacy of protection. The Contractor shall repair any leaks that are found or that may develop on any portion of the temporary by-pass line within 2 hours of notification. If a leak is not repaired, the Engineer may deduct from monies due, or that may become due, the cost of the water lost as a result of the leak. Should it be necessary for Village forces to repair any portion of the by-pass system as a result of the Contractor not responding within a 2 hour period, all costs incurred by the Village for such repairs will be deducted from monies due, or that may become due, to the Contractor.

The Contractor shall supply, install and maintain temporary water services where required to properties affected by the CIPP watermain lining operations, including both domestic water service and fire protection water supply. All hose used for individual property connections shall be a minimum of $\frac{3}{4}$ " in diameter, designed for a working pressure of 125 psi, and be free from defects in material and workmanship. The pipe, hose and all other materials which are to be furnished by the Contractor for use in conjunction with the temporary service pipe and temporary connections to property services and branches shall be all new materials and shall be approved by the Engineer, and shall be fully adequate to withstand the pressures and all other conditions of use and shall be of material which does not impart any taste or odor to the water in accordance with ANSI/NSF 61 Standard.

Pipe and fittings shall provide adequate water tightness and care shall be exercised throughout the installation of any temporary pipe and service fittings to avoid the possible pollution of any Village main or property services or contamination of the temporary service pipe proper. All temporary by-pass lines and service connections shall be disinfected by the Contractor under the supervision of the Engineer. This work shall be in accordance with the special provision for WATER MAIN TESTING CLARIFICATION contained herein. Where temporary service connections are disinfected in conjunction with the temporary by-pass watermain no physical connections to hose bibs will be permitted until after successful disinfection. Flushing of the private service connections will be required.

The temporary service connections shall be valved near the point of connection to the by-pass and also to the private plumbing system so that both the by-pass line and private services may be chlorinated separately from the final connection. During freezing, stormy or inclement weather, no work shall be performed except that which is incidental to cleaning or lining, unless otherwise directed by the Engineer.

All temporary by-pass service attachments and any other attachments to fire hydrants shall be made with an approved backflow prevention device and shall be made in such a manner that if it becomes necessary they can be easily removed so that the hydrant can be used for firefighting purposes.

No by-pass service pipe or property service connections shall be installed during freezing or inclement weather and pipes already in use shall be removed or drained and services restored when so directed by the Engineer.

Each house or business shall have its own temporary water service connection to the by-pass pipe and a connection to the private plumbing via a wye at an outside tap. The branching of the wyes from a single spigot shall not be permitted; nor will connecting buildings in series.

Where possible, the temporary water supply shall be connected to each building by attaching the water supply to an external sillcock. If the buildings have atmospheric vacuum breakers (AVB's) on their sillcocks, the AVB's will need to be removed prior to connecting the temporary water supply. These AVB's must be replaced when the lining project is completed. The cost of this work shall be included in the cost of TEMPORARY BY-PASS WATERMAIN.

In order to prevent the temporary water supply backfeeding through the service lateral, the Contractor may turn off internal valves at the water meter, remove the water meter and cap or plug the open water lines so as to prevent leakage and/or contamination of the house or business plumbing. The Contractor shall also cap the ends of the water meter so as to retain water inside of the meter, thus avoiding damage to the meter. If the Contractor chooses to remove and re-install the meter, this work shall not be paid for but shall be considered included in the cost of TEMPORARY BY-PASS WATERMAIN.

If the building does not have an available external sillcock, or the flows required to the building (including fire flows) exceed the capacity of the external sillcock, the Contractor shall provide to the Engineer for approval a proposed plan for maintaining water service through the existing water service.

Making the connection from the approved temporary by-pass main to the houses or businesses may be required to be performed during the overnight hours or on weekends. No additional compensation will be allowed for work during these hours. The Contractor shall obtain permission from the owners of the affected properties and shall utilize the services of a licensed plumber for any and all plumbing. A Village representative shall be present during all coordination with the property owners. All connections shall be made within the existing right-of-way or easements.

It shall be the responsibility of the Contractor to ensure an adequate water supply, including fire suppression flows, at all times. During the construction process, the Contractor will be responsible to restore a customer's water supply within a two hour period upon notification from the Engineer.

The Contractor shall supply, install and maintain temporary fire hydrants and the necessary valves and fittings. These temporary hydrants shall be connected to the by-pass main and placed in locations as instructed by the Engineer. The maximum spacing between temporary hydrants shall be 150 feet, unless otherwise approved by the Engineer. The temporary hydrants shall meet the nozzle and operating nut requirements of the Village. A detailed sketch of the hydrant shall be provided to the Engineer by the Contractor for approval by the Fire Department prior to commencement of work.

The hydrants shall be set in such a manner that the Fire Department will not have difficulty making a connection with a fire hose, where the hydrants will cause the least obstruction to vehicular and pedestrian traffic, and will least likely be damaged. The Contractor shall lay out the locations of the fire hydrants for approval by the Engineer and Fire Department prior to installing the hydrants.

All temporary hydrants, valves, fittings, and service pipes and all other material shall be adequate to withstand the pressures and conditions of use and shall provide adequate watertightness. Before permanently shutting down the watermain that is to be cleaned and lined, the Contractor shall test all temporary hydrants and valves to ensure that they are in proper working order.

All temporary hydrants shall have reflective tape on the barrel for increased visibility. The temporary hydrants must stand in an upright position at all times. Once put into use, the temporary hydrants shall be maintained until the existing hydrants are restored to service. The hydrants which are out of service during construction operations shall be bagged and clearly marked with a "HYDRANT OUT OF SERVICE" tag.

It is anticipated that the temporary water supply piping may cross commercial driveways, sidewalks, and side roads. Temporary ramping will not be allowed unless approved by the Engineer. The Contractor shall saw cut and remove the pavement and any adjacent curb and gutter to permit the burying of the by-pass pipe. The resulting trench shall be backfilled with trench backfill and a temporary HMA patch meeting the approval of the Engineer. The Contractor shall maintain the patch for the duration of the time that it is in place. This work shall be included in the cost of TEMPORARY BYPASS PUMPING SYSTEM.

Upon removal of the by-pass pipe, the disturbed areas shall be repaired as follows:

Parkways: All grassed areas shall be restored with 4" of topsoil meeting the requirements of the special provision "Section 211 Topsoil" and sod meeting the requirements of the special provision "Section 252 Sodding".

HMA Driveways: Existing asphalt driveways shall be restored with 4 inches of Hot-Mix Asphalt Surface Course, Mixture D, N50 placed on a minimum of 6 inches of compacted Aggregate Base Course, Type B. This work shall include the application of Bituminous Materials (Prime Coat) per the Standard Specifications and as directed by the Engineer.

Commercial PCC Driveways: Existing concrete driveways shall be restored with 8 inches of Class PV concrete placed on a minimum of 4 inches of Aggregate Base Course, Type B. The full width and length of existing concrete panels shall be removed and replaced unless otherwise approved by the Engineer. Jointing of the concrete shall match the existing joint locations.

PCC Pavement: Existing concrete pavement shall be restored with Class B patches placed on a minimum of 6 inches of Aggregate Base Course, Type B. The thickness shall match the thickness of the existing pavement. If the limit of the pavement removal is within 4 feet of an existing joint, this additional pavement shall be removed and replaced

with the patch. The patching shall follow the requirements of Section 442 of the Standard Specifications and IDOT Highway Standard 442101 for Class B patches.

HMA Pavement: Existing asphalt pavement shall be restored with Class D patches placed on a minimum of 6 inches of Aggregate Base Course, Type B. The thickness shall match the thickness of the existing asphalt pavement. The patching shall follow the requirements of Section 442 of the Standard Specifications and IDOT Highway Standard 442201 for Class D patches. The patch material shall be Class D Patch (HMA Binder IL-19mm), 4% voids at 70 gyrations. This work shall include the application of Bituminous Materials (Prime Coat) per the Standard Specifications and as directed by the Engineer.

Combination Concrete Curb and Gutter: Existing curb and gutter removed, damaged, or undermined shall be restored with new combination concrete curb and gutter matching the type of existing curb and gutter and meeting the requirements of Section 606 of the Standard Specifications. The Engineer shall be the sole judge as to whether the curb and gutter requires replacement. The proposed curb and gutter shall be tied to the existing curb and gutter with 2-18" long, No. 4, epoxy coated dowel bars drilled and grouted into the existing curb and gutter. The curb and gutter shall be placed on a minimum of 6 inches of Aggregate Base Course, Type B.

Sidewalks: Existing sidewalks shall be restored in accordance with 5" of Portland Cement Concrete over 4" Subbase Granular Material, Type B. Curb ramps shall be installed in accordance with the IDOT Highway Standards. Detectable warnings shall be in accordance with the special provision for DETECTABLE WARNINGS (SPECIAL).

Restoration of all areas beneath paved surfaces, or within 5 feet of paved surfaces, shall include backfilling with trench backfill meeting the requirements of the special provision TRENCH BACKFILL CLARIFICATION. Restoration of all paved areas shall also include repair or replacement of the existing aggregate subbase (when required by the Engineer) and compaction of all exposed subbase.

Pavement Markings: The Contractor shall record the locations of existing pavement markings prior to removing pavement. The markings shall be replaced on the new pavement at the existing locations in accordance with Section 780 of these special provisions.

Raised Reflective Pavement Markers: The Contractor shall record the locations of existing raised reflective pavement markers prior to removing pavement. The markers shall be replaced on the new pavement at the existing locations in accordance with Section 781 of the Standard Specifications.

All restoration of areas disturbed by the installation, use, and removal of the temporary bypass lines shall be included in the cost of TEMPORARY BYPASS PUMPING SYSTEM.

All barricades and signs required by the Engineer to indicate the location of the temporary main and/or patches shall be provided by the Contractor and included in the cost of TEMPORARY BYPASS PUMPING SYSTEM.

The Contractor shall make all shut-offs of property services and shall furnish water for the temporary by-pass service from a hydrant or other temporary service.

Access. Although right-of-way or easements exist for all water distribution and transmission lines within the scope of the proposed contract, it is possible that the Contractor may require access to public and/or private property in order to efficiently and effectively complete the work. Any access to private property beyond that prescribed by recorded easements is strictly at the discretion of the landowner. The Village will make reasonable efforts to secure the cooperation of affected landowners, but cannot guarantee access to private property.

Removal of By-Pass and Temporary Service. After the watermain being lined has been returned to service, the temporary service lines shall be removed.

The Contractor shall not be permitted to reuse temporary by-pass main or service connections without re-disinfecting using a method approved by the Engineer.

Method of Measurement. Temporary by-pass watermain will be measured on a lump sum basis.

Basis of Payment. This work will be paid for at the contract lump sum price for TEMPORARY BYPASS PUMPING SYSTEM, which price shall include all costs for labor, materials, equipment, and incidentals necessary to perform the work.

BRICK PAVER REMOVAL

Description. This work shall consist of the complete removal of existing brick pavers, including sand setting bed material, concrete bases, filter fabric material, and salvaging or disposal of bricks, in accordance with the details in the plans and these special provisions.

Full-size bricks in good condition shall be sorted, stored securely, and salvaged by the Contractor, then stacked neatly on pallets, banded, and delivered by the Contractor to the Public Works facility at 2498 East Lake Avenue. The Village may refuse all or some of the salvaged paver bricks based on their need for salvaged bricks at the time of the removal. All bricks not accepted by the Village shall be disposed of by the Contractor.

Method of Measurement. Brick paver removal will be measured for payment in place and the area computed in square feet.

Basis of Payment. The work described herein shall be paid for at the contract unit price per square foot for BRICK PAVER REMOVAL.

Removal of adjacent concrete head bands shall be paid for separately as CURB REMOVAL. Removal of existing concrete underlayment shall be paid for separately as SIDEWALK REMOVAL.

REMOVE AND RELOCATE LAWN SPRINKLER SYSTEM (VOG)

Description. Work under this item shall consist of removing and replacing portions of a lawn sprinkler system that is required to be replaced as a result of construction operations and not as a result of Contractor negligence. This shall include all systems within the limits of the proposed excavation, regardless as to whether they are shown on the plans.

The Contractor shall inventory all existing lawn sprinkler systems that are proposed to be relocated and replaced in the presence of the Engineer. The Contractor shall take all necessary precautions to protect existing lawn sprinkler systems that are to remain in place. The Contractor shall replace only that portion of the lawn sprinkler system that is required by legitimate construction operations and approved by the Engineer. The replacement sections of the lawn sprinkler system shall be compatible with the existing system. The Engineer shall approve locations of the replacement appurtenances prior to demolition activities. Once the replacement sprinklers are replaced and have been tested by the Contractor in the presence of the Engineer, the item will be measured for payment.

The Contractor shall be responsible for coordinating all work involving the sprinkler systems with the owning residents and businesses. The Contractor shall obtain written approval of any relocations or repairs from the owners prior to final payment.

All damage to existing systems beyond the limits of excavation required for the project, as determined by the Engineer, shall be repaired by the Contractor to the satisfaction of the sprinkler system owner at no cost to the contract.

Method of Measurement. This work shall be measured for payment in feet of sprinkler system relocated.

Basis of Payment. This work shall be paid for at the contract unit price per foot for REMOVE AND RELOCATE LAWN SPRINKLER SYSTEM in accordance with the plans and as described herein for all materials (including sprinkler heads and valves) and labor necessary to complete the work.

STUMP REMOVAL ONLY

Description. This item shall include removal of stumps for trees that have previously been removed by others. All excess chips and debris from this operation shall be removed from right-of-way. This work shall be done in accordance with Section 201 of the Standard Specifications for tree removal.

Basis of Payment. Stump removal shall be paid for at the contract unit price per unit diameter for STUMP REMOVAL ONLY measured as specified herein across the top of the stump. All references to tree removal in the Standard Specifications shall include the item STUMP REMOVAL ONLY.

EXPLORATION TRENCH (SPECIAL)

Description. This item shall consist of excavating a trench at locations designated by the Engineer for the purpose of locating existing tile lines or other underground facilities within the limits of the proposed improvement. The trench shall be deep enough to expose the line but not more than one foot deeper than the line, and the width of the trench shall be sufficient to allow proper investigation to determine if the line needs to be relocated or replaced.

The exploration trench shall be backfilled with gradation CA 6 stone, the cost of which shall be included in the item of EXPLORATION TRENCH (SPECIAL).

Method of Measurement. The exploration trench will be measured for payment in feet of actual trench constructed.

Basis of Payment. This work will be paid for at the contract unit price per foot for EXPLORATION TRENCH (SPECIAL), regardless of the depth required, and no extra compensation will be allowed for any delays, inconveniences or damages sustained by the Contractor in performing the work.

DETECTABLE WARNINGS (SPECIAL) (VOG)

Description. Work under this item shall consist of installing cast iron detectable warning tiles on ADA curb ramps as shown on the plans and according to IDOT Highway Standards. Work shall be performed according to Section 424 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, except as herein modified.

Materials. Detectable warning tiles shall be cast iron. The color of the detectable warning tiles is to be approved by the Engineer.

The cast iron detectable warnings shall be of uniform quality and free of surface defects.

The detectable warnings shall meet requirements of ASTM A 48 Class 30 or better.

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

Basis of Payment. This work will be paid for at the contract unit price per square foot for DETECTABLE WARNINGS (SPECIAL).

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

Description. This work shall consist of the removal of the existing HMA surface to a variable depth with a self-propelled milling machine in accordance with Section 440 of the Standard Specifications.

The milling depth shall provide for the minimum HMA surface and binder thickness specified as referenced from the proposed grading plans.

Method of Measurement. HMA surface removal for subsequent resurfacing 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 square yard for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH, regardless of the number of passes required to achieve the required depth.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS (D1)

Effective: April 1, 2001

Revised: January 2, 2007

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 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) 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) 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."

WINTERIZED TEMPORARY ACCESS (D1)

Effective: January 1, 2012

Revised: March 5, 2012

Description. This work shall consist of constructing, maintaining and removing winterized temporary access for private and commercial entrances and side roads designed for use throughout the winter months.

Materials. Materials shall be according to the following.

ITEM	ARTICLE/SECTION
Hot-Mix Asphalt	1030

Construction Requirements

For projects lasting longer than one construction season, the contractor shall construct and maintain temporary access composed of an HMA surface course over an existing aggregate temporary access. The contractor shall install the winterized temporary access prior to winter shut down at the direction of the engineer. The top 2" of the existing aggregate temporary access should be removed and replaced with 2" of Hot-Mix Asphalt. Compensation will be given for the winterized temporary access at the time of the installation of the Hot-Mix Asphalt surface course.

HMA Surface Course. The Hot-Mix Asphalt surface course shall be 2 in. thick when compacted. HMA Surface Course, Mix "D", N50 shall be used except as modified by the plans or as directed by the Engineer. This work shall be constructed in accordance with the applicable portions of Section 406 of the Standard Specifications and as directed by the Engineer. The material shall conform to the applicable portions of Section 1030 of the Standard Specifications.

The winterized temporary access shall be constructed to the dimensions and grades of the existing aggregate temporary access.

Maintaining the winterized temporary access shall include repairing the HMA surface course after any operation that may disturb or remove the winterized temporary access to the satisfaction of the Engineer.

When use of the winterized temporary access is discontinued, the winterized temporary access shall be removed according to Article 440.03 of the Standard Specifications. The material shall be disposed of according to Article 202.03 of the Standard Specifications or may be utilized in the permanent construction with the approval of the Engineer.

Method of Measurement. Winterized temporary access for private and commercial entrances and roads will be measured for payment at the contract unit price per square yard for every private entrance, commercial entrance or road constructed for the purpose of winterized temporary access.

Basis of Payment. Winterized temporary access for private and commercial entrances and roads will be paid for at the contract unit price per square yard for TEMPORARY ACCESS (WINTERIZE) as specified in the plans. Partial payment of the square yard amount bid for each winterized temporary access will be paid according to the following schedule:

(a) Upon construction of the winterized temporary access, sixty percent of the contract unit price per square yard will be paid.

(b) Subject to the approval of the Engineer for the adequate maintenance and removal of the winterized temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.

TEMPORARY RAMP (SPECIAL)

Description. This work shall consist of constructing and removing temporary hot-mix asphalt ramps. The ramps shall be constructed to winterize the joint between existing and widened pavement when the widened pavement surface is more than 1.5 inches below the existing pavement surface. The ramps shall only be installed when directed by the Engineer.

Temporary HMA ramps shall have a minimum taper rate of 1:3 (V:H) unless otherwise approved by the Engineer.

The temporary ramps shall be removed in a manner meeting the Engineer's approval just prior to milling of the existing pavement.

Materials. HMA shall be according to Section 406 of the Standard Specifications and the applicable hot-mix asphalt special provisions contained herein. The HMA mixtures shall be as specified in the plans.

Method of Measurement. Temporary ramps (special) 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 square yard for TEMPORARY RAMP (SPECIAL).

STORM SEWERS, PIPE UNDERDRAINS, SANITARY SEWERS, AND WATERMAIN

Whenever during construction operations any loose material is deposited in the flow line of drainage structures such that the natural flow of water is obstructed, it shall be removed at the close of each working day. At the conclusion of construction operations, all utility structures shall be free from dirt and debris. The cost of all materials required and all labor necessary to comply with these provisions will not be paid for separately, but shall be considered as included in the cost of the storm sewers installed and drainage structures installed, adjusted, or reconstructed as part of this project.

The Contractor shall furnish all labor, equipment and material necessary for dewatering trench excavations as well as shoring trench walls during utility operations. The cost to comply with the above shall be included in the cost of the storm sewers, drainage structures, valve vaults, watermain, and fire hydrants installed as part of this project.

The cost of making storm sewer connections to existing or proposed storm sewer or drainage structures shall be included in the cost of the storm sewer or drainage structure being constructed.

Removal of sleeves on existing storm sewers shall be included in the cost of the storm sewer being removed.

When existing drainage facilities are disturbed, the Contractor shall provide and maintain temporary outlets and connections for all private or public drains, sewers or catch basins. The Contractor shall provide facilities to take in all storm water which will be received by these drains and sewers and discharge the same. The Contractor shall provide and maintain an efficient pumping plant, if necessary, and a temporary outlet. The Contractor shall be prepared at all times to dispose of the water received from temporary connections until such time as the permanent connections with sewers are built and in service. This work will not be paid for separately, but shall be included in the cost of the storm sewers and drainage structures installed as part of this project.

Top of frame ("rim") elevations given on the plans are only to assist the Contractor in determining the approximate overall height of each structure. Frames on all new structures shall be adjusted to the final elevations of the areas in which they are located. This work will not be paid for separately, but shall be included in the cost of the drainage structures installed as part of this project.

Unless otherwise noted on the plans, the existing drainage facilities shall remain in use during the period of construction. Locations of existing drainage structures and sewers as shown on the plans are approximate. Prior to commencing work the Contractor shall determine the exact locations of existing structures which are within the proposed construction limits.

During construction, if the Contractor encounters or otherwise becomes aware of any sewers, underdrains, or field drains within the right-of-way other than those shown on the plans, he shall so inform the Engineer, who shall direct the work necessary to maintain or replace the facilities in service and to protect them from damage during construction if maintained. Existing facilities to be maintained that are damaged because of the non-compliance with this provision shall be replaced at the Contractor's own expense. Should the Engineer have directed the replacement of a facility, the necessary work and payment shall be in accordance with Sections 550 and 601, and Article 104.02 of the Standard Specifications.

The Contractor shall determine when flat slab tops are required on manholes and catch basins. No additional compensation shall be allowed for the use of flat slab tops.

The Contractor shall be aware that at times the Engineer may require a change in storm sewer elevation due to a utility line or other obstruction. If such a grade change does not alter the pipe classification, the additional excavation, backfill, and sheeting required shall be included in the cost of the storm sewer being installed. If the revised grade results in a change in pipe classification, payment will be made for the revised type of storm sewer.

Backfilling storm sewer constructed under the roadway specified under Article 550.07 (b,c) of the Standard Specifications will not be allowed.

WATER MAIN LINE STOP

Description. The work shall be in accordance with manufacturer's recommendations and consists of the installation of line stops in existing water mains complete, including locating existing mains; saw cutting, and removal and disposal of existing pavements; excavation; removal and disposal of waste excavated materials; protection, repair, or replacement of existing utilities; dewatering, including erosion and sedimentation control methods and devices to provide protection to the environment from all pumping operations; sheeting; shoring; tapping of pipes to install line stop plugs; installation of line stops; and temporary fencing, barricades, and other items needed to provide traffic control and protection and protection to the public.

The work includes removal of the line stop plug, capping of the tapping sleeve; and backfilling of the excavation with compacted granular backfill.

Each line stop installed for construction shall be located so to allow use of, or location/exposure of, the line stop in the future. Each line stop location shall be determined by making and recording measurements between the line stop and three nearby permanent structures, property pins/corners, etc.

This work shall only be performed when approved by the Engineer when it has been determined by the Village that closing of existing valves will not be possible to isolate the water main to perform the work included in the contract.

Basis of Payment. This work shall be paid for at the contract unit price per each WATER MAIN LINE STOP, of the diameter specified, which price shall be payment in full for performing all work as specified herein and as shown on the plans and details or as determined by the Engineer.

MANHOLES, TYPE A, 6'-DIAMETER, WITH 2 TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE

Description. This work shall consist of constructing a type A manhole, with two type 1 frame, closed lids, and a restrictor plate.

Materials. The materials shall meet the requirements of Article 602.02 of the "Standard Specifications".

General. The work shall be performed according to Section 602 of the "Standard Specifications", IDOT Standard Drawing 602406, and the detail included in the plans.

Basis of Payment. This work will be paid for at the contract unit price per each for MANHOLES, TYPE A, 6'-DIAMETER, WITH 2 TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE. The unit price shall include all equipment, labor and materials required to furnish and install the manhole, frames and lids, and restrictor plate.

SANITARY MANHOLES TO BE ADJUSTED (VOG) SANITARY MANHOLES TO BE RECONSTRUCTED (VOG)

Description. This work shall consist of adjusting or reconstructing existing sanitary manholes at locations indicated on the plans. This work shall be performed in accordance with Section 602 of the Standard Specifications with the following addition:

A new internal or external chimney seal which fully encompasses the rings and castings shall be installed after the frame has been adjusted to the final elevation. The chimney shall be in accordance with Village of Glenview detail U-2 and the manufacturer's recommendations.

The manhole lid shall be rotated out of the proposed sidewalk or bike path as much as possible, as determined by the Engineer.

Sanitary manholes owned by MWRD shall be adjusted or reconstructed in accordance with MWRD Standard No. 8-122 included in the plans.

Basis of Payment. This work shall be measured and paid for at the contract unit price per each for SANITARY MANHOLES TO BE ADJUSTED or SANITARY MANHOLES TO BE

RECONSTRUCTED which price shall include all labor, equipment, and materials necessary to perform said work.

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)

Description. This work shall consist of adjusting frames and lids for drainage and utility structures located within the pavement area in accordance with Section 603 of Standard Specifications and the following modifications:

All work shall follow and be according to the District One Detail BD-8 "Details for Frames and Lids Adjustment with Milling".

On sanitary manholes, a new internal or external chimney seal which fully encompasses the rings and castings shall be installed after the frame has been adjusted to the final elevation. The chimney shall be in accordance with Village of Glenview detail U-2 and the manufacturer's recommendations.

Add the following to Article 603.09 of the Standard Specifications:

"Removing frames and lids on drainage and utility structures in the pavement prior to milling, and adjusting to final grade prior to placing the surface course, will be paid for at the contract unit price each for FRAMES AND LIDS TO BE ADJUSTED (SPECIAL).

FLEXIBLE DELINEATORS

Description. This work shall consist of furnishing and installing flexible delineators on concrete medians.

General. The Contractor shall provide new low density polyethylene flexible delineator posts, fastening screws, base and anchor bolts. The delineators shall be engineered to meet Manual on Uniform Traffic Control Devices (MUTCD) specifications for nighttime use. The delineators shall meet the height and color requirements shown in the plans unless otherwise approved by the Engineer. All colors must be within tolerance limits as specified in the MUTCD and 23 CFR Part 655, Appendix to Subpart F. All bands shall meet MUTCD retroreflectivity requirements. Flexible delineators shall be made of materials resistant to extreme temperature changes in the range of -20° F to 160° F, ultraviolet light, ozone, hydrocarbons, stiffening with age, and a series of direct wheel impacts with speeds varying up to 65 mph, and rebounds to a vertical position if struck by a standard vehicle. Delineators shall meet NCHRP 350 crashworthy requirements.

Post locations shall be as specified on the plan sheets. All bases shall be black.

The Contractor shall affix the heavy duty base to the median in a manner meeting the manufacturer's requirements.

Method of Measurement. Flexible delineators shall be measured on a per each basis, for each entire assembly installed, which shall include the post, fastening hardware, base, and anchor bolts.

Basis of Payment. This work will be paid for at the contract unit price per each for FLEXIBLE DELINEATOR, which price shall be full compensation for all materials, labor, equipment, and incidentals to complete the work as specified.

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).

TELESCOPING STEEL SIGN SUPPORT (SPECIAL) (VOG)

Description. This work shall consist of furnishing and installing telescoping steel sign support for ground-mounted signs.

Steel posts

Steel posts shall conform to the standard specifications for hot-rolled carbon sheet steel, structural quality, ASTM designation A570, Grade 50.

Finish: The square tubing shall be given triple coated protection by an in-line application of hot-dipped zinc (galvanized) per AASHTO M-120, followed by a chromatic conversion coating and a clear organic exterior coating. The inside surface shall be given corrosion protection by a double in-line application of a full zinc-based organic coating tested in accordance with ASTM B117 standards.

Shape: The cross section of the post shall be square tubing formed of 14 gauge (.083 U.S.S. gauge) steel, carefully formed into size and corner induction welded in such a manner that neither weld nor flash shall interfere with telescoping properties.

DIE: Punched Knockouts- Knockout diameter shall be 7/16 of an inch, +/- 1/64 inch on 1-inch centers, on four opposite sides down the entire length of the post. Knockouts shall be on the

center line of each side in true alignment and opposite of each other. Knockouts shall not be punched open.

Yield Strength Properties: 60,000 PSI minimum.

Tolerances:

Nominal outside Dimensions: 2" x 2"

Outside Tolerance at all sides and corners: +/- .010"

Note: Measurements from outside dimensions shall be made at least 2 inches from the end of the tube

Wall thickness tolerances: +/- .008"

Convexity and Concavity: Measured in the center of the flat sides, tolerance in +/- .010" determined at the corner

Square Tolerance: +/- 0.012"

Permissible Twist in 3' Lengths: .062"

Straightness Tolerance: Permissible variation in straightness is 1/6" in 3 feet

Corner Radii: Standard outside radii shall be 5/32 of an inch +/- 1/32"

Length: The length of each post shall have a permissible length tolerance of +/- 1/4"

Cross Section Post shall be as follows:

Size: 2" x 2"

Gauge: 14

Weight: 2.16 lbs/foot

Length: 10 feet

Telescoping Properties: The finished posts shall be straight and have a smooth, uniform finish.

All ends shall be free from burrs and shall be cut square.

Ground Anchors

Material: Steel posts shall conform to the standard specifications for hot rolled carbon sheet steel, structural quality, ASTM designation A570, Grade 50. Average minimum yield strength after cold forming is 60,000 PSI

Shape: The cross section of the post shall be square tube formed of 12 gauge (.105 U.S.S. gauge) steel, carefully rolled to size and shall be welded directly in the corner by high frequency resistance welding and externally scarfed to agree with corner radii.

Finish: Ground anchors shall be manufactured from hot-dipped galvanized steel conforming to ASTM A653, G90, structural quality, Grade 50, Class 1. The corner weld is zinc coated after scarfing operation. The steel is also coated with a chromate conversion coating and a clear organic polymer topcoat. Both the interior and exterior of the post shall be galvanized.

Cross Section: Perforated ground posts shall be the following sizes:

Size: 2 1/4" x 2 1/4" U.S.S. Gauge-12

Weight (lbs./foot): 2.42

Length: 36"

Holes: Holes shall be 7/16 +/- 1/64 inches in diameter on one (1) inch centers on all four sides down the entire length of anchor. Holes shall be on centerline of each side in the true alignment and opposite each other directly and diagonally. Holes shall be punched open.

Fins: Ground anchors shall incorporate a set of 4 fins welded and galvanized to the posts and meet structural specifications.

Method of Measurement. This work will be measured for payment in feet. The length measured will be the total length of all sections installed, except for any internal splice members and any telescoping of a top section more than 12 inches into a base section.

Basis of Payment. This item shall be paid for at the contract unit price per foot for TELESCOPING STEEL SIGN SUPPORT (SPECIAL).

RECESSED REFLECTIVE PAVEMENT MARKER (HMA)

Description. This work shall consist of installing reflective pavement markers in a recessed groove on hot-mix asphalt (HMA) pavement surfaces. A pavement marker consists of a reflector housing ("housing") and a prismatic reflector ("reflector"). Recessed reflective pavement markers shall not be placed in portland cement concrete pavement or placed on bridges or bridge approach slabs.

Materials. Materials shall conform to Article 1096.01 of the Standard Specifications for Road and Bridge Construction with the following exceptions:

Replace paragraph 1096.01(a) with the following:

(a) The housing shall be made of polycarbonate plastic and be compatible with prismatic reflectors listed on the Illinois Department of Transportation approved/qualified product list of snowplowable raised pavement markers. The housing shall have detachable leveling tabs that ensure the housing and reflector sit below the pavement surface.

Replace paragraph 1096.01(b) with the following:

(b) The housing shall be approximately 5.0 inches wide, 3.0 inches long, and 0.70 inches high. The surface of the housing shall be free of scale, dirt, rust, oil, grease, or any other contaminant which may reduce bond.

Construction Requirements. Spacing and orientation of the pavement marker shall be as shown on the plans or as directed by the Engineer.

The pavement surface temperature and the ambient air temperature shall be at or above 50 °F (10 °C) at the time of application of the prismatic reflector.

A recessed groove shall be cut in the pavement 5.25 inches wide, 1.0 inches deep on a 15.5-inch diameter. An additional 3.5-foot-long grind taper shall start from 0 inches (normal pavement) to 0.35 inches depth (full-recessed) on either end of the groove. For monodirectional marker installations heading uphill, the uphill grind taper may be omitted.

The recessed area shall be cleaned free of all loose material, and dry before the placement of the housing. All excess material resulting from the construction of the recessed area shall be completely removed from the surface of the roadway by means of vacuum sweeper truck. The housing shall be cemented with epoxy in the center of the 1.0-inch-deep recessed groove. The epoxy used shall meet the requirements of AASHTO M 237 specification for epoxy adhesive.

The Contractor shall make certain the housing surface is dry and free of dirt and debris prior to placing the reflector in the housing. The reflector shall be laminated to an elastomeric pad and adhesively attached to the housing. The protective paper or plastic film covering the adhesive pad shall be removed immediately prior to placing the reflector on the housing. Once the film covering is removed, extreme care shall be taken to avoid contamination of the exposed pad surface. An adhesive meeting the marker manufacturer's specifications shall be used. The adhesive shall be placed either on the reflector or on the housing in sufficient quantity so as to ensure complete coverage of the contact area with no voids present and with a slight excess after the reflector is pressed in place. Adhesive material shall not be permitted on the reflective surface of the prismatic reflector.

Inspection. A straight edge shall be placed across the recess to check that both the housing and reflector are below the pavement surface. Inspection and acceptance shall conform to Article 781.04 of the Standard Specifications for Road and Bridge Construction except as follows: all references of "raised reflective pavement marker" shall be replaced with "recessed reflective pavement marker".

Basis of Payment. This work shall be paid for at the contract unit price per EACH for RECESSED REFLECTIVE PAVEMENT MARKER (HMA).

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 of 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.

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.

BRICK PAVER SIDEWALK

Description. This work shall consist of installing brick paver sidewalks adjacent to curbs and at other specific locations as shown on the Plans in accordance with the Local Roads Recurring Special Provision for "Paving Brick and Concrete Paver Pavements and Sidewalks" and the details shown in the Plans, except as modified herein.

The brick paver sidewalk shall be constructed by an experienced installer who has completed unit paver installations similar in material, design and extent to the proposed Work and whose completed work has a record of satisfactory in-service performance. The Contractor shall submit, in writing to the Engineer prior to beginning work, qualifications of the designated brick paver sidewalk installer for approval.

Submittals. Product data and samples shall be submitted to the Engineer for approval prior to ordering the following items:

- a. Brick Pavers including Paving Field – 1 each of all colors and types to be installed, with labels indicating location of placement.

Materials.

Clay pavers shall be as manufactured by The Belden Brick Company.

Paver: City Line series, Extruded, Wire Cut, Standard size: 2-1/4" x 4" x 8"

Color: Regimental Full Range

Joint sand shall be clean, well-graded, sand free from soluble salts and other harmful or foreign matter. Sand shall be natural silica sand or sand manufactured from crushed rock. Do not use screenings or stone dust. Joint sand material shall comply with ASTM C33 gradation.

Prime coat shall meet the requirements of Section 1032.

Neoprene-Modified Asphalt Adhesive: Paving manufacturer's standard adhesive consisting of oxidized asphalt combined with 2% neoprene and 10% long fibered mineral fibers containing no asbestos.

Hot-Mix Asphalt Setting Bed: Mix shall be a hot-mixed asphalt mixture of 7% asphalt cement (ASTM D 3381, viscosity grade AC-10 or AC-20) and 93% fine aggregate and shall be heated to 300° F.

Installation. Do not use unit pavers with chips, cracks, voids, discolorations, and other defects that might cause staining in the finished work. Mix pavers from several pallets or cubes, as they are placed, to produce a uniform blend of colors and textures. Cut unit pavers only when required using a motor-driven masonry wet-saw equipment to provide clean, sharp, unchipped edges. Use full units as much as possible.

After a 4" aggregate base course has been installed (paid for separately as SUBBASE GRANULAR MATERIAL, TYPE B, 4"), drill and grout in tie bars 2' on center into the back of curb as shown on the Detail in the Plans. Install a concrete slab to the limits of the Brick Paver Sidewalk area in accordance with the detail and Section 424, with a 6" x 6" welded wire fabric placed a minimum of 1" from the bottom of the concrete.

Once the concrete has cured, 1.5" diameter weep holes shall be installed at local low points and filled with open graded material.

Apply a prime coat, install a hot-mix asphalt setting bed, and compact to a minimum thickness of $\frac{3}{4}$ ". Apply neoprene-modified asphalt adhesive to cold setting bed by squeegeeing or troweling. Proceed with setting of paver units when the adhesive is dry to the touch. The HMA setting bed shall only be installed when the ambient air temperatures is 45° F or warmer and concrete base is dry. Apply adhesive when ambient air temperature is above 50° F and the temperature has not been below 35° F for 12 hours prior to application.

Pavers shall be placed in a four row running bond pattern. Place pavers carefully by hand in straight courses, maintaining accurate alignment and uniform top surface. Place the unit pavers with hand-tight joint, and fill joints with sand by hand sweeping over the surface until joints are filled. Note that there may be slight variation in paver thickness, so additional HMA setting bed may need to be installed so the finish grades of both are flush. Protect completed work with plywood panels.

Tolerances: Do not exceed 1/32-inch (0.8 mm) between adjacent units and no more than 1/8-inch from slope in 10 feet.

Do not allow traffic on the pavers until sand has been vibrated into joints.

Method of Measurement. This work will be measured in place and the area computed in square feet.

Basis of Payment. This item shall be paid for at the contract unit price per square foot for BRICK PAVER SIDEWALK which price shall be payment in full for performing the work as specified herein and as directed by the Engineer.

CONCRETE WASHOUT FACILITY

Description. The Contractor shall take sufficient precautions to prevent pollution of streams, lakes, reservoirs, and wetlands with fuels, oils, bitumens, calcium chloride, or other harmful materials according to Article 107.23 of the "Standard Specifications".

General. To prevent pollution by residual concrete and/or the by-product of washing out the concrete trucks, concrete washout facilities shall be constructed and maintained on any project which includes cast-in-place concrete items. The concrete washout shall be constructed, maintained, and removed according to this special provision. Concrete washout facilities shall be required regardless of the need for NPDES permitting. On projects requiring NPDES permitting, concrete washout facilities shall also be addressed in the Storm Water Pollution Prevention Plan.

The concrete washout facility shall be constructed on the job site in accordance with Illinois Urban Manual practice standard for Temporary Concrete Washout Facility (Code 654). The Contractor may elect to use a pre-fabricated portable concrete washout structure. The Contractor shall submit a plan for the concrete washout facility, to the Engineer for approval, a minimum of 10 calendar days before the first concrete pour. The working concrete washout facility shall be in place before any delivery of concrete to the site. The Contractor shall ensure that all concrete washout activities are limited to the designated area.

The concrete washout facility shall be located no closer than 50 feet from any environmentally sensitive areas, such as water bodies, wetlands, and/or other areas indicated on the plans. Adequate signage shall be placed at the washout facility and elsewhere as necessary to clearly indicate the location of the concrete washout facility to the operators of concrete trucks.

The concrete washout facility shall be adequately sized to fully contain the concrete washout needs of the project. The contents of the concrete washout facility shall not exceed 75% of the facility capacity. Once the 75% capacity is reached, concrete placement shall be discontinued until the facility is cleaned out. Hardened concrete shall be removed and properly disposed of outside the right-of-way. Slurry shall be allowed to evaporate, or shall be removed and properly disposed of outside the right-of-way. The Contractor shall immediately replace damaged basin liners or other washout facility components to prevent leakage of concrete waste from the washout facility. Concrete washout facilities shall be inspected by the Contractor after each use. Any and all spills shall be reported to the Engineer and cleaned up immediately. The Contractor shall remove the concrete washout facility when it is no longer needed.

Basis of Payment. The cost of all materials required and all labor necessary to comply with the above will be paid for at the lump sum price for CONCRETE TRUCK WASHOUT. The

unit price shall include all labor, equipment and materials necessary to complete the work, regardless of the number of washout facilities required.

PAVEMENT MARKING (SPECIAL)

Description. This work shall include furnishing and installing interconnected preformed thermoplastic pavement markings per Section 780 and as described herein.

Materials. The material must be a resilient preformed thermoplastic product which contains a minimum of thirty percent (30%) intermixed anti-skid/anti-slip elements and where the top surface contains anti-skid/anti-slip elements. These anti-skid/anti-slip elements must have a minimum hardness of 8 (Mohs scale) and meet the following gradation:

Size Gradation		Intermix		Drop - On	
US Mesh	µm	Retained, %	Passing, %	Retained, %	Passing, %
10	2000	0 - 10%	90 - 100%		
12	1700	5 - 25%	75 - 95%		
14	1400	15 - 50%	50 - 85%		
16	1180	15 - 50%	50 - 85%	0 - 5%	95 - 100%
18	1000	10 - 30%	70 - 90%	0 - 10%	90 - 100%
20	850	0 - 5%	95 - 100%	5 - 25%	75 - 95%
25	710	0 - 2%	98 - 100%	15 - 50%	50 - 85%
30	600			15 - 50%	50 - 85%
35	500			5 - 25%	75 - 95%
40	425			0 - 10%	90 - 100%

The material must be resistant to the detrimental effects of motor fuels, antifreeze, lubricants, hydraulic fluids, and other motor vehicle fluids.

The material shall be capable of being applied on bituminous and/or portland cement concrete pavements primarily by the use of an infrared heater supplied by the material manufacturer. A handheld propane heat torch supplied by the material manufacturer may be used in isolated areas. The use of a compactor or similar equipment shall not be necessary. The material must be able to be applied to asphalt and concrete surfaces without preheating the application surface to a specific temperature. The material must be capable of being

affixed to green concrete (concrete that has set but not appreciably hardened). The material shall not require the portland cement concrete application areas to be cured or dried out.

The material must be capable of conforming to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures. It shall not be necessary to use a grid template or to make pattern grooves or other indentations in the asphalt or concrete surface prior to applying the material. It shall not be necessary to inlay the material in grooves or indentations. It shall not be necessary to heat the pavement or application surface to a specific temperature.

The material is typically supplied in segments measuring 24 in. by 24 in. The material must be factory assembled and interconnected with a compatible material, so that it is unnecessary to assemble the individual "brick" pieces at the jobsite. Certain 24 in. by 24 in. material segments may be rotated to create additional pattern options using standard parts.

Interchangeable, patterned borders shall be available to allow flexibility in design options using standard parts.

The material must be able to be applied in temperatures down to 45°F (7.2°C) without any special storage, preheating or treatment of the material before application.

The material must be able to be applied to asphalt and concrete surfaces without using a grid template and without forming a pattern in the pavement substrate. Heating indicators must be evenly distributed on the surface of the material in order to ensure correct application.

The material must cover the entire application area and be flush across the surface. Once applied, no part of the pavement surface should be visible in the application area.

Material must be composed of an ester modified rosin impervious to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements. Pigments and anti-skid/anti-slip elements must be uniformly distributed throughout the material. The thermoplastic material conforms to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state, being non-reflective, and potentially being of a color different from white or yellow.

Pigments:

White: The material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.

Red, Blue, and Yellow: The material shall be manufactured with sufficient pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected. The pigment system must not contain heavy metals nor any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

Other Colors: The pigment system must not contain heavy metals nor any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

Heating indicators: The top surface of the material shall have regularly spaced indents. These indents shall act as a visual cue during application that the material has reached a molten state allowing for satisfactory adhesion and proper embedment of anti-skid/anti-slip elements, and a post-application visual cue that the application procedures have been followed.

Skid Resistance: The surface of the preformed thermoplastic material shall contain factory applied anti-skid material with a minimum hardness of 8 (Mohs scale). Upon application the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303.

Slip Resistance: The surface of the preformed thermoplastic material shall contain factory applied anti-skid material with a minimum hardness of 8 (Mohs scale). Upon application the material shall provide a minimum static friction of coefficient of 0.6 when tested according to ASTM C 1028 (wet and dry), and a minimum static coefficient of friction of 0.6 when tested according to ASTM D 2047.

Thickness: The material must be supplied at a minimum thickness of 125 mil (3.18mm).

Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

Interconnected: The material must consist of interconnected individual pieces of preformed thermoplastic pavement marking material, which through a variety of colors and patterns, make up the desired design. The individual pieces in each material segment, typically 24 in. (61cm) by 24 in. (61cm), must be factory assembled and interconnected with a compatible material so that in the field it is not necessary to assemble the individual pieces within a material segment. Multiple patterned border segment options shall be available in the material in 24 in. (61cm) long sizes.

Manufacturing control and ISO certification. The manufacturer must be ISO 9001:2008 certified for design, development and manufacturing of preformed thermoplastic, and provide proof of current certification.

Application. **Manufacturer Certified Applicator Requirement:** The material shall be supplied and applied only by an applicator certified by the material manufacturer. The applicator shall provide proof of current certification before commencing work. The Certified Applicator shall follow the material manufacturer's current published application procedures.

Asphalt: The material shall be applied primarily by using an infrared heater supplied by the material manufacturer. A handheld propane heat torch supplied by the material manufacturer may be used in isolated areas. The material must be able to be applied at ambient and road temperatures down to 45°F (7.2°C) without any preheating of the pavement to a specific temperature. A sealer specified and supplied by the material manufacturer must be applied to

the substrate prior to material application to ensure proper adhesion, and to provide bond reinforcement for larger volumes of material. The sealer must be supplied by the material manufacturer in 300/600ml cartridges along with sealer application supplies. A thermometer shall not be required during the application process. The pavement shall be clean, dry and free of debris. The supplier must provide current application instructions to the Certified Applicator.

Portland Cement Concrete: The same application procedure shall be used as described for Asphalt.

Method of Measurement. This work shall be measured in square feet installed.

Basis of Payment. This work shall be paid for at the contract unit price per square foot for PAVEMENT MARKING (SPECIAL), which shall include all labor, equipment and materials as described within and as necessary to complete this work.

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.

PORTLAND CEMENT CONCRETE SURFACE REMOVAL

Description. This work consists of the partial depth removal of existing or proposed Portland cement concrete pavement at the locations specified on the plans or directed by the Engineer. This work shall be performed in accordance with the application portions of Section 440 of the Standard Specifications.

The Contractor shall minimize the dust particles during the milling operation. The grindings resulting from the surface removal shall be removed from the site and the surface cleaned of any loose material and debris.

Method of Measurement. PCC surface removal 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 square yard for PORTLAND CEMENT CONCRETE SURFACE REMOVAL, of the specified depth. Saw cuts shall be included in the cost of this item and not paid for separately.

CURED-IN-PLACE PIPE LINER

Effective: April 15, 2022

Description. This work shall consist of installing cured-in-place pipe (CIPP) liners to rehabilitate pipe culverts or storm sewers.

Materials. Resin-impregnated flexible tubes or pipes shall be according to ASTM D 5813. Upon delivery of materials to the jobsite, the Contractor shall furnish independent test reports from the supplier showing the physical properties of the CIPP liner meets the material requirements of the applicable ASTM documents for the proposed liner.

Construction Requirements. Installation of the CIPP liner shall consist of a resin impregnated flexible tube or pipe being inverted or pulled into the host pipe and expanded to conform to the interior of the host pipe. The resin impregnated tube shall then be cured in place, creating a continuous structural liner within the host pipe.

The Contractor shall submit the following to the Engineer for approval, at least 15 days prior to the start of work:

- (a) **References.** A list containing at least three projects completed within the last three years prior to this project's bid date in which the Contractor performing this work has installed CIPP liners. The list of projects shall contain names and phone numbers of representatives who can verify the Contractor's participation on those projects.
- (b) **Experience.** Name and experience record of the CIPP liner supervisor
- (c) **Materials.** Manufacturer's published literature for the proposed CIPP liner.
- (d) **Installation Procedure.** Proposed methods of water diversion, cleaning and preparation of the existing culvert, ASTM standard for the proposed CIPP liner, setup locations for pulling or inverting the CIPP liner, testing and inspection methods, and final clean-up operations. Quality control procedures for conformance with applicable water testing and stormwater management requirements.

The Contractor shall submit a design report for each CIPP liner in the Contract, sealed by an Illinois licensed Structural Engineer, prior to the installation of the respective CIPP liner. Prior to completion of the design report, the Contractor shall clean and inspect the host pipe as described in the installation procedure. The Contractor shall provide a recording of the inspection to the Engineer. Authorization from the Engineer shall be requested to clear any obstructions not able to be removed by conventional sewer cleaning equipment.

The design report shall be submitted to the Engineer for approval prior to installation and include the following.

- (a) The anticipated length and diameter of CIPP liner.
- (b) The location and characteristics of cavities in and around the existing structure, and the location and quantity of any additional materials required, such as grout, pea gravel, or flowable backfill, to repair the existing structure and fill these cavities.
- (c) The location of any deformities such as jagged edges that may impact the liner installation or its function, and a plan to correct the deformities.

(d) Design calculations and required in-place liner thickness of the CIPP liner. The wall thickness shall be calculated using the methodology provided in the applicable ASTM standard practice for the approved CIPP liner. The design loads shall be as per the AASHTO LRFD Bridge Design Specifications. The host pipe shall be considered fully deteriorated. The proposed CIPP liner shall have a 50-year design life, with a factor of safety of two (2).

(e) The final in-place hydraulic opening shape and dimensions of the CIPP liner.

Liner shall not be installed until the design report has been approved by the Engineer. Liner shall not be installed if rain is in the forecast on the day of installation.

After completion of the design report, but prior to installation of the CIPP liner, the Contractor shall confirm the host pipe is in suitable condition for the installation of the proposed CIPP system.

Pipes shall be drained and flow shall be diverted.

The CIPP shall be installed according to ASTM F 1216, ASTM F 1743, or ASTM F 2019.

A resin impregnated sample (wick) shall be provided by the Contractor to provide verification of the curing process taking place in the host pipe.

The CIPP wall thickness installed by the Contractor shall be the Required In-Place Liner Thickness calculated in the design report, with allowable tolerances as per the applicable ASTM documents. Measured sample thickness will not include any portion not considered by the Engineer to be considered a structural component of the system.

The Contractor shall inspect the CIPP liner and provide the Engineer with a recording showing and describing the entire length of the completed liner. Any excessive wrinkling or damaged CIPP liner areas shall be repaired or modified to the satisfaction of the Engineer.

Method of Measurement. This work will be measured for payment in place in feet. When the CIPP enters a manhole, inlet, or catch basin, the measurement will end at the inside wall of the manhole, inlet, or catch basin.

Basis of Payment. This work will be paid for at the contract unit price per foot for CURED-IN-PLACE PIPE LINER, of the diameter specified.

Debris removal requiring equipment beyond conventional sewer cleaning equipment, repair of existing pipes, and filling of voids prior to the installation of the CIPP liner will be paid for according to Article 109.04.

STORM SEWERS (WATER MAIN REQUIREMENTS)

Description. This work shall consist of the installation of watermain quality pipe in areas where the storm sewer line crosses above the watermain. All work shall be performed in accordance with Section 550 of the Standard Specifications and Section 40 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," 8th edition.

Materials. All pipe materials shall conform to Section 40-2 of the Standard Specifications for Water and Sewer Main Construction in Illinois, 8th edition. The materials shall be class 50 ductile iron, and shall be approved by the Engineer prior to their installation. The watermain quality pipe shall be connected to the storm sewer pipe on both ends by use of non-shear couplings with stainless steel bands or a method approved by the Engineer. The cost of these connections shall be included in the cost of STORM SEWERS (WATER MAIN REQUIREMENTS).

Method of Measurement. Water main quality storm sewers will be measured in accordance with Article 550.09 of the Standard Specs.

Basis of Payment. This work shall be measured and paid for at the contract unit price per foot for STORM SEWERS (WATER MAIN REQUIREMENTS) of the size specified which price shall include all labor, equipment, and materials necessary to perform said work.

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.

PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 8-1/2"
PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 11-1/2"

Description. This work shall consist of widening existing pavement with a portland cement concrete base course widening.

All work shall be performed in accordance with Section 354 of the Standard Specifications.

Method of Measurement. Portland cement concrete base course widening will be measured for payment according to Article 353.13.

Basis of Payment. This work will be paid for at the contract unit price per square yard for PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, of the thickness specified.

CURED-IN-PLACE PIPE (CIPP)

Description. This work shall consist of the lining of watermain by the installation of cured-in-place-pipe (CIPP) and shall be performed in accordance with ASTM F1216-22 or ASTM1743-21 and the following:

Submittals. At or before the preconstruction meeting, the Contractor shall provide a detailed method statement for the proposed work. The method statement shall include:

1. An engineered liner design for each watermain size to be lined that clearly shows the proposed liner thickness. The designs shall be in accordance with the requirements of the specifications provided in this document and must identify all design parameters including short-term and long-term CIPP properties used in the design. A one page design summary shall be provided showing for each watermain size, the design liner thickness, the design pressure and the design watermain depth.
2. Independent test data shall be provided to substantiate the CIPP material strength and modulus used in design.
3. Approval certifications (complete with supporting literature) of NSF/ANSI Standard 61 for potable water for the CIPP watermain liner to be used.
4. Material specifications and structural details of the proposed watermain liner in sufficient detail to enable confirmation that the design and materials proposed will meet the design requirements contained herein.
5. A summary of the types of resins and the resultant cure schedules for each length and size of water main to be lined.
6. A summary of the Manufacturer's proposed installation procedure including an example of the design process wet-out plan and curing cycle summary sheet to be submitted for each liner diameter.

7. A certified original copy (complete with supporting literature) from the Contractor's resin supplier of the Infrared Spectrograph of the catalyzed resin mixture to be used on this Contract.
8. Installation of the liner method shall be performed by trained personnel. Such training shall be conducted by a qualified representative of the liner method manufacturer. Certificates of such training for all personnel involved in the operation of the liner method shall be provided.
9. An overall phasing plan of the watermain to be lined shall be provided. The plan should indicate the locations of all access pits that will be required for the lining installation, service reinstatements, and fire hydrants. The location of the temporary bypass main shall be shown, including all of the connections required to maintain service to the adjacent properties.
10. A project schedule shall be provided that is coordinated with the proposed phasing plan listed above.
11. A traffic safety and staging plan.

Materials. The lining shall be cured-in-place-pipe (CIPP) in accordance with the requirements of ASTM F1216-22 or ASTM F1743-21 except where modified herein.

All materials must be delivered to the site in their appropriate containers that clearly show that the product has various agencies' approvals.

The proposed product, installation process, and testing procedures must meet all terms of the Illinois EPA Division of Public Water Supplies permit issued for this project.

The liner shall utilize a thermally cured epoxy type resin where the cure does not rely on ambient heat for curing. The liner shall be uniformly impregnated with the correct quantity of resin to produce a cured result that has homogeneous and uniform physical properties throughout the liner wall that meet or exceed the required physical properties premised in the liner design. In this context the liner wall does not include the surface waterproof membrane layer. The correct quantity of resin shall be determined by the Contractor and be in accordance with the specifications of the liner manufacturer. The liner shall be provided with sufficient resin to effect the required bonding to the inside surface of the existing watermain including around the service connections.

The liner shall be capable of remote reinstatement of service connections from within the interior of the watermain.

The liner shall be able to be repaired or new appurtenances added to the lined main without the use of end seals or proprietary couplings.

The Contractor shall confirm and record the internal diameters of each watermain section to be lined by measuring the watermain internal diameters. Measurements shall be taken for each individual liner installation. At a minimum, internal diameter measurements shall be made at each end of a watermain section to be lined. Measurements shall be made with a suitably accurate device (such as inside calipers). Measurement by tape measure is not acceptable. The internal diameter measurements made by the Contractor shall be available to the Engineer for review if requested. The Contractor shall immediately notify the Engineer

of any step size discrepancy (such as nominal 12" instead of 10") between any internal diameter measurement and the diameter identified in the Contract.

The Contractor shall size the liner to be installed based on the watermain section's inside diameter that will be in effect when the liner is installed, that is, the post cleaning and preparation size of the watermain. The Contractor shall be aware that measurements taken after cleaning and preparation may differ significantly (for the purpose of liner sizing) from measurements taken before cleaning and preparation.

To assure the required tight fit and bonding to the watermain inside surface, it is acceptable that the Contractor over-size the liner by a small amount to assure that the required tight fit is achieved. This over-sizing may result in a small longitudinal ridge (typically called a fold) along the lined watermain. Due to existing small variations in the watermain's actual size along the section, correspondingly the size of the fold may also have variations along the watermain that are acceptable. Such folds along the lined watermain are acceptable providing they meet the requirements described elsewhere in this specification.

The lining wall thickness shall be designed by the Contractor in accordance with ASTM F1216-22. The design method and the design parameters for the liner are described below. The Village reserves the right to reject the design, design method or design parameters should they differ from those prescribed in this section.

The thickness determined by the liner wall thickness design shall be the required wall thickness of the completed liner. The wall thickness shall be the wall thickness of the liner's structural zone only. Wall thickness measurements of the finished liner used to compare with design thickness shall not include such non-structural zones. If these zones have been included in the measurement, they shall be subtracted to determine the effective thickness of the liner. The determination of the actual thickness of the installed liner shall be in accordance with the method in ASTM D5813-04(2018). It is noted that among its provisions for measuring liner thickness and for calculating the effective thickness from these measurements, the ASTM D5813 requires that no thickness can be less than 87.5% of the required thickness.

In accordance with the F1216 design method, vacuum is treated as an external pressure. For design purposes, use of short-term liner flexural modulus is acceptable for vacuum resistance. Alternately, an equivalent vacuum may be used with long-term flexural modulus that has the same result as specified vacuum using short-term flexural modulus.

The short-term values of flexural modulus (as per ASTM 0790) and tensile strength (as per ASTM 0638) used as the starting values from which the long-term design values are derived shall be values that will be reliably and repeatedly obtained in the installed liners as substantiated by testing samples from installed liners. These short-term values shall be identified in the liner design.

The Contractor shall check and determine that actual field conditions for any watermain section to be lined corresponds with the liner design for that installation. The field conditions to be checked shall include the deepest cover over top of the watermain and live load situation. Where the existing liner design is not appropriate for the field conditions, the

Contractor shall adjust the liner design accordingly and the liner installed shall meet the requirements of the adjusted design. The adjusted liner design shall be submitted to the Engineer for approval. The cost for the adjusted liner and liner design shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

No liner shall be installed that does not meet the requirements for actual field conditions, including required liner thickness for actual field conditions.

CIPP Liner Design Parameters

Parameter	Requirements
Design Method	ASTM F1216-22
Design Life	50 years or greater
Safety Factors	External Loads: 2.0; Internal Pressure: 2.0; Vacuum: 2.0
Design Pressure	150 psi internal pressure
Vacuum	10 psi below atmospheric pressure
External Hydrostatic Pressure	Based on ground water table at ground surface
External Earth Load	For 6 feet cover or the cover at the liner location, whichever is greater
Live Load	AASHTO HS20-44
Ovality	5%
Soil Weight	120 pcf minimum
Soil Modulus	1,000 psi minimum
Creep Reduction Factor	50% maximum
CIPP Liner Flexural Modulus	The flexural modulus for design equations X1.1, X1.3 and X1.4 shall be the long-term flexural modulus. The long-term flexural modulus used in design shall be the amount of short-term flexural modulus (as per ASTM D790) retained for the design life. The retention factor shall be derived from long-term testing and be appropriate for stress and stress duration in the installed liner. Independent third party test data is required to substantiate the short-term and long-term values used in design. Minimum short-term value shall be in accordance with the minimum requirement in ASTM F1216-22.
CIPP Liner Tensile Strength	The liner tensile strength for design equation X1.7 shall be the long-term tensile strength. The long-term tensile strength to be used in design shall be the amount of short-term tensile strength (as per ASTM D638) retained for the design life. The retention factor shall be derived from long-term testing and be appropriate for stress and stress duration in the installed liner. Independent third party test data is required to substantiate the short-term and long-term values used in design. Minimum short-term value shall be in accordance with the minimum requirement in ASTM F1216-22.

CIPP Liner Flexural Strength	Minimum value shall be in accordance with the minimum requirement in ASTM F1216-22.
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Fit, Finish and Properties. The cured liner within the watermain shall meet the following requirements for fit, finish and properties:

Liner Fit and Finish to Existing Watermain

The outside surface of the finished liner shall be in contact with and bonded to the inside surface of the existing watermain. The level of bonding shall correspond to the design and performance parameters for the liner. The inside surface of the existing watermain is the surface after the watermain has been prepared for lining in accordance with the cleaning and preparation requirements. Where any space or gap exists between the outside surface of the liner and the inside surface of the existing watermain the liner fit (and liner) will be considered deficient, subject to exceptions noted below. Should the lining be damaged as a direct result of the Contractor's operation or reveal evidence of defective work or materials prior to the completion of the contract, such damage or defective portions shall be removed and replaced.

Exceptions to Liner Fit to Existing Watermain

Existing watermain irregularities include joints, protrusions, plugged main stops, bumps or other similar situations in the existing watermain that remain after the watermain has been cleaned and prepared in accordance with the requirements.

Finished Liner Installation

The liner shall be free of any interior bulges, ribs, ripples, or other irregularities except where these irregularities comply with the Liner Wall Thickness and Tolerance, fit, shape and wall thickness given below or, in the case of over-sizing folds, comply with fold requirements.

Liner Terminations at Ends of Liner Runs

Liner terminations at the ends of liner runs shall be smooth, square and neatly cut. There shall be no separation from the inside surface of the existing watermain. The terminations shall be watertight to the requirements for external and internal hydrostatic pressure.

Liner Termination at Valves

At valves, the interface between the exterior surface of the liner and the valve shall be watertight to the requirements for external and internal hydrostatic pressure. The finished ends of the liner shall be neat and smoothly cut.

Liner Fold

A fold is defined as a longitudinal ridge in the liner that is due to the liner's circumference being in excess of the circumference of the post cleaning and preparation circumference of the watermain. Some types of liner tubes require sizing with an excess circumference to assure that the liner fully contacts and is bonded to 100% of the circumference of the watermain. Such excess liner circumferential material shall result in a tight fold in the cured liner caused by the compression of the excess material from pressure used for inflating and curing the liner. Fold size may vary along the lined section in correspondence with variations in the watermain size along the same section.

Folds shall be tightly compressed, solid and without any space or voids within the fold. Folds shall be fully cured. A fold configuration shall not result in any annular space between the liner and the watermain. Folds shall not have any tube inner membrane material trapped within the fold.

Regardless of fold size and configuration, no fold shall be permitted that will negatively affect the longterm performance of the liner for its intended purpose including liner performance in accordance with design requirements. The Engineer shall be the sole judge as to the acceptability of the fold. If the Engineer determines the fold is not acceptable, the Contractor shall replace the required section of water main at no cost to the contract.

Liner Wall Thickness and Tolerance

The liner's finished wall thickness shall be as specified in the engineered design submitted, meeting the requirements of the Contract, and as approved by the Engineer, subject to the following tolerances:

- Liner Wall Thickness Minus Tolerance: 0%
- Liner Wall Thickness Plus Tolerance: 25%

The thickness for comparison purposes shall be determined in accordance with ASTM 05813-04(2018). The effective thickness for comparison to required thickness shall not include any nonstructural layers or membranes.

Liner Physical Properties

The final installed liner shall have the following required physical properties:

- Flexural Modulus: Shall meet or exceed the short-term value used in the liner design or the minimum value in the ASTM F1216, whichever is greater.
- Tensile Strength: Shall meet or exceed the short-term value used in the liner design or the minimum value in the ASTM F1216, whichever is greater.

The final installed liner shall possess the required long-term retention characteristics such that the long-term values of flexural modulus and tensile strength used in design will be met by the liner over its design life.

Watermain and Service Locates. The Village will perform the initial locating of the watermain and services. The Contractor shall be responsible for verifying the location and size of the existing main and services prior to the start of work. This work shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Access Pits. The Contractor shall excavate pits for accessing the watermain for the CIPP lining process. The Contractor shall be responsible for developing a plan for the location of the proposed access pits. The Contractor should use locations of existing tees, crosses, bends, reducers and valves for access pit locations as often as possible. When an access pit is excavated and a fitting is contained within it, the Contractor shall replace the fitting. The cost of the fitting replacement shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

The Contractor shall note that the locations for all access pits shall be approved by the Engineer prior to the beginning of construction. The work shall include all excavation,

shoring, tight sheeting, bracing protection and restoration of access pits. This work shall be included in the cost of CURED-IN-PLACE PIPE (CIPP). Restoration shall be as defined elsewhere within this special provision.

Valves and/or fittings in close proximity to access pits shall be braced as required.

It shall be the Village's responsibility to remove any unforeseen obstructions that might prevent the liner installation. The Village shall have the right to make corrective repairs using in-house staff or a third-party contractor if it is deemed to be in the Village's best interest to do so (within fourteen day's notice), or the Engineer may authorize the Contractor to make repairs that are billable under the pay items of this contract. At the request of the Engineer or due to unforeseen conditions, the Contractor shall excavate, supply and replace complete tees, bends (including vertical bends), crosses, reducers, etc. The restoration shall be as per the pay items included in the Contract.

When excavating bends/fittings/access points to watermain, and the access point requires the Contractor to remove water service connections, the Contractor shall be responsible to re-establish the water service connections to the watermain prior to backfill by re-tapping or relocating the service connection within the excavation. This work shall be considered included in the cost of CURED-IN-PLACE PIPE (CIPP).

When working in areas where pedestrian traffic is present, the Contractor shall take all necessary precautions to protect pedestrians from accidental injury, and shall secure all work areas against unauthorized entry, in a manner meeting the approval of the Engineer. At a minimum, temporary construction fence shall be placed around all open access pits. All work site protection shall be considered included in the cost of CURED-IN-PLACE PIPE (CIPP). The Contractor shall maintain pedestrian access along the project corridor on at least one side of the roadway throughout the duration of the project.

When the access pits fall within the existing pavement and are not protected by temporary concrete barriers, the access pits shall be covered by a steel plate meeting the approval of the Engineer whenever work is not being performed in the access pit. The cost of this work shall be considered included in the cost of CURED-IN-PLACE PIPE (CIPP). If the Contractor elects to re-open the lane to traffic with the Engineer's approval prior to the restoration of the access pit, any required flowable fill around the outside of the shoring necessary to support the plate and any asphalt material necessary to secure the plate in place and provide adequate ramping, shall be installed by the Contractor and shall be considered included in the cost of CURED-IN-PLACE PIPE (CIPP).

The Contractor shall be responsible for dewatering all access pits and valve vaults. The Contractor shall be responsible for all testing, analysis, and reports required to ensure that the water being discharged to the existing storm or sanitary sewers is not contaminated. Any contaminated water shall be disposed of in accordance with all applicable laws. This work shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Cutting of Pipe. Where reconnection is required, watermain pipe shall be cut with proper cutting devices (such as power operated cut-off saws or other approved methods). Cuts shall

be neat and square to the watermain and be free of jagged ends or lips. Watermain pipe shall not be broken apart unless all pieces with broken ends are to be discarded.

Capping Open Pipe Ends. All watermain pipes shall be capped, plugged or bulk-headed using a mechanical joint plug/cap anytime there is no work being performed on the pipe. The bulkhead must be capable of preventing water from entering or exiting the watermain pipe, and shall be equipped with a relief valve and be properly braced when the possibility exists that the capped section could be pressurized. This work shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Closed Circuit Television (CCTV) Inspections and Reports. The following applies to the CCTV inspections that are required as per contract requirements:

- 1) The Contractor shall provide 48 hours notice prior to a required CCTV inspection in order that the Engineer can arrange, if required, to be present for the CCTV inspection.
- 2) The camera equipment, the cable and any other related equipment that enters the watermain shall be doused with chlorine prior to insertion into the watermain. This step will be repeated for every section that is inspected. This is done to keep the equipment clean and operating in such a manner as to prevent any contamination of the watermain during use. The CCTV equipment shall be suitable for and allow viewing of the full perimeter of pipe for all watermain sizes included in the contract. The CCTV equipment shall employ a suitable color camera with pan and tilt capability. The range of the camera equipment from one access shall allow single pass inspections of not less than 600 feet of watermain length.
- 3) The watermain shall be sufficiently dry so that any remaining water does not obscure any part of the interior of the watermain during the CCTV inspection. The inspection speed shall allow proper analysis of the watermain condition with a maximum travel speed of 15 feet/minute. The inspection must stop and view each service connection clearly and completely for at least 5 seconds. The camera shall provide sufficient light and proper focus to enable clear viewing of the pipe surface at all locations.
- 4) Each individual CCTV inspection shall be continuous over the watermain section. The CCTV shall have on-screen identification, using Village provided identification numbers, of the location of the inspection including a start screen (or screens) that show all of the information necessary to describe and locate the CCTV inspection. During the inspection the screen shall continuously show a brief watermain section identification and the metered location of the camera within the watermain.
- 5) Each individual watermain section CCTV inspection shall be recorded and the recording shall be the complete continuous CCTV inspection. The recorded CCTV inspection shall be provided to the Engineer on a portable hard drive that will become the property of the Village or other approved media. The file name shall clearly and concisely identify the CCTV inspection. The electronic media may contain more than one CCTV inspection provided that the file name for each inspection properly identifies the CCTV inspection. Filenames that do not properly identify the inspection video will result in rejection of the electronic media by the Engineer. Video inspection file format shall be an MPEG-2 (or other Engineer approved format) that is suitable for proper playback on commonly used video file playing software applications. At minimum the video files must play properly on correctly configured, up to date versions of Microsoft Windows Media Player, VideoLAN

VLC Player and Apple QuickTime Player. Video files that do not play properly on all 3 players will be rejected.

- 6) The video inspection shall be accompanied by an inspection report in PDF format on the same electronic media. The report shall list and locate all features noted in the CCTV inspection including service connections. The CCTV inspection file and the PDF report file shall be grouped together on the electronic media along with any other information relevant to the specific CCTV inspection. The inspection report for each section of watermain inspected shall report as a minimum: contract number, street name, date of inspection, pipe type and size, start and end locations, length of pipe inspected, summary comments, disk, tape and file numbers. Village provided identification numbers shall be used. The summary comments should identify all distinguishing features of the watermain to include but not limited to service locations, condition of liner (or pre-lining condition of watermain), bends, valves, ponding water and poor visibility.
- 7) CCTV inspections (including reports) shall be submitted to the Engineer. These submissions will be used by the Engineer to determine, in part, that the CIPP watermain lining work meets contract requirements and is acceptable to the Engineer.

Preliminary CCTV Inspection. When suitable access has been made to the interior of a section of watermain to be lined, a preliminary CCTV inspection shall be performed and recorded. The CCTV inspection shall be used to determine that the inside condition of the watermain (including whether there are any existing coatings or linings), can be made suitable for CIPP lining, and to locate any watermain configurations (such as vertical bends, tees, diameter changes, etc) that are not previously identified. The CCTV inspection shall also be used to determine location of further access pits that may be needed based on the findings of the inspection. The CCTV inspection shall also be used to provide additional information for the Water Services Statement (WSS).

The Engineer shall be present for a live viewing of the CCTV inspection. The Contractor shall give a minimum of 48 hours notice to the Engineer. The cleaning and preparation for lining may proceed following the CCTV inspection at the direction of the Engineer. A CCTV inspection video and report shall be submitted within 48 hours to document the conditions.

This work shall be paid included in the cost of CURED-IN-PLACE PIPE (CIPP).

Where the CCTV inspection finds that the watermain section is in a condition that cannot be made suitable for lining by the cleaning and preparation process, the Contractor shall advise the Engineer of this finding within 48 hours. In this situation, the Contractor shall wait for further instruction from the Engineer before undertaking any further work on the watermain section. Further instruction may include deleting the section from lining, replacing part or all of the section with new watermain, or some other appropriate action to be taken. In such a case, the CCTV inspection will be paid per Article 109.04 of the Standard Specifications and any further work required that is outside of the contract will be negotiated with the Contractor.

Water Service Statement (WSS). For each section of watermain to be lined, a Water Services Statement (WSS) shall be prepared by the Contractor. The WSS shall list all of the service connections, including relevant street address, size, location etc. The WSS shall be started with the known service connections from drawings, curb stops, etc. Additional service connections or service connection information determined from the CCTV inspections shall

be added to the WSS and include service connections that are to be abandoned (and ground flush).

The format for the WSS shall be, at a minimum, an MS Excel spreadsheet or equivalent suitable for electronic information handling. As the information of the WSS will evolve during the course of the work on the watermain section to be lined, the WSS must be clearly identified by section of watermain lining and the current date of the WSS. Village-provided identification numbers shall be used.

A WSS, finalized for commencement of lining, shall be submitted to the Engineer before start of liner installation. Liner installation shall not proceed without the WSS submission. Where possible the WSS should accompany the post cleaning and preparation CCTV inspection.

The WSS shall be used as a control document for reinstatement of service connections into the lined watermain. Once all service connections have been reinstated, the WSS shall be updated to identify the reinstatements.

A WSS, finalized after lining to include a record of service reinstatements, shall be submitted to the Engineer and accompany the final CCTV inspection of the completed liner.

Cleaning and Preparation of Watermain. All rust, tuberculation, deposits, coatings, linings and all foreign materials shall be removed from the inside of the pipe and valves by a method approved by the Engineer. Candidate methods include water-propelled cleaning devices and cable pulled scrapers and rack boring. The Contractor shall pass the cleaning device through the main as many times as is necessary and in each direction as necessary to obtain results satisfactory to the Engineer.

The cleaned and prepared surface shall be suitable for lining and its long-term performance including any necessary bonding of the liner to the watermain surface. Where any small hard deposit cannot be removed by cleaning and preparation operations and such deposit is of a size and in a location that will not negatively affect long-term liner performance then, at the discretion of the Engineer, lining shall be permitted.

In the event that any service taps protrude too far into the interior of the existing watermain resulting in interference with required cleaning and preparation, or protrude to the extent that they will have a negative effect on the liner (including its long-term performance), the service taps shall be trimmed back to an acceptable protrusion length. The method of trimming shall not damage the service taps and the method must be approved by the Engineer. This work shall be paid included in the cost of CURED-IN-PLACE PIPE (CIPP).

Cleaning and preparation operations shall be carried out in a manner that will avoid the application of vertical or horizontal loads on the pipe. Boxes of adequate size with compartments or other suitable and approved means shall be provided to function as settling tanks for the retention of solids removed during cleaning, flushing and pumping operations. The locations of the settling tanks shall be submitted by the Contractor to the Engineer prior to the start of the cleaning operation. At no point shall water used in the cleaning of the watermain be allowed to come in contact with soil in access pits that have had material

classified as special or non-special waste. If this occurs, disposal of the contaminated water shall be at the Contractor's expense.

The Contractor shall comply with state, local and federal safety and health regulations applicable to the work being performed, including traffic control and OSHA approved confined space entry procedures. Prior to entering access areas such as manholes, and performing inspection or cleaning operations, an evaluation of the atmosphere to determine the presence of toxic or flammable vapors or lack of oxygen must be undertaken in accordance with local, state, or federal safety regulations.

Debris captured and removed from the system shall be transported and disposed of in a lawful manner. The Village will not provide a location for disposal of water main system debris. Cleaning, including capture, removal, transportation and disposal of debris shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Upon total completion of the cleaning and preparation (including grinding of any service taps), the post cleaning and preparation CCTV inspection shall be made.

Grinding Flush of Abandoned Service Taps. Service connections that have been identified as no longer required (abandoned) shall be ground back flush with the inside surface of the watermain prior to the installation of the CIPP lining and prior to the post cleaning and preparation CCTV inspection. These service connections and their grind-off shall be identified on the Water Services Statement (WSS). This work shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Post Cleaning and Preparation CCTV Inspection. When the cleaning and preparation has been fully completed for a watermain section, a post preparation CCTV inspection (including report), shall be performed and recorded. The CCTV inspection and report shall be used by the Engineer (and the Contractor) to determine that the watermain cleaning and preparation is in accordance with requirements and that the watermain interior condition is suitable for lining. The Contractor shall notify the Engineer 48 hours in advance of the CCTV inspection so that the Engineer may be present for the live CCTV inspection.

The CCTV inspection report shall be submitted to the Engineer for his or her approval of the cleaning and preparation 48 hours prior to the start of lining of the watermain section. Lining shall not take place unless the Engineer has approved the cleaning and preparation. In some circumstances, the Engineer may waive the requirement for receiving and approving the submission before lining - such as in the case of approving the cleaning and preparation during live viewing of the CCTV inspection. However, even when the Engineer waives the 48 hour prior to lining requirement, the inspection shall remain a required submission to be received no later than the final CCTV inspection of the completed liner.

This work shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Installation. The installation of the liner into the watermain complete with curing is the responsibility of the Contractor. The Contractor shall follow the liner manufacturer's installation recommendations to the extent that they are appropriate for specific circumstances.

The actual lining installation procedure shall be in accordance with the Contractor's informational submittal described above. Any proposed deviation from the submitted procedure shall be submitted, with explanation, to the Engineer for approval and the submission shall include the approval of the lining manufacturer.

The Contractor shall ensure that all required equipment (including as required by the Contract) is on site and in satisfactory working order prior to commencing the installation of a lining section.

Prior to the lining of each watermain section the Contractor shall submit to the Engineer a certificate of analysis, identifying the batch number and product name and confirming that the liner to be installed complies with the product specification and design submissions. The Contractor shall also provide the Engineer with copies of the wet-out information sheet itemizing the dimensions of the liner and the quantity of each material to be used in the lining of the watermain section. Following installation of the liner the Contractor shall provide the Engineer with copies of the boiler and thermocouple log in a format that will enable direct comparison with the process curing cycle contained in the Contractor's information submittal.

The Contractor shall have in place and follow a quality control and assurance program for the CIPP watermain liner that addresses, at a minimum: cleaning and preparation of the existing watermain, liner sizing, correct liner for the installation (tube size, materials and design), liner thickness (design and as cured), liner resin (mix, impregnation and uniform distribution), liner fit and finish, liner service connection reinstatements and liner as-cured physical properties. Upon the Engineer's request, the Contractor shall provide full details of this program to the Engineer. Where in the Engineer's opinion, the program is not adequate, or not being followed, the Engineer will require the Contractor to make rectification to the Engineer's satisfaction.

The Contractor shall keep detailed records that are sufficient to track the progress and parameters of each liner run installation. These records shall easily allow identification, using Village-provided identification numbers, of individual liner runs and include, at a minimum: preliminary and final liner sizing, specifics of liner tube ordered, specifics of liner tube installed, location information independent of pit locations, number and size of services, installation dates, return to service dates and quality problems (if any). Upon the Engineer's request, the Contractor shall show or provide these records. Where, in the Engineer's opinion, the records are not adequate, the Engineer will require the Contractor to make rectification to the Engineer's satisfaction.

Before the installation begins, the Contractor shall determine the minimum pressure required to hold the tube tight against the existing pipeline, and the maximum allowable pressure so as not to damage the tube. In order to ensure a proper fit of the CIPP tube to the host pipe, the pressure shall be maintained between the minimum and maximum pressures until the installation has been completed. The use of a lubricant during the installation process may be needed to reduce friction. Any lubricant used shall be a nontoxic, NSF/ANSI 61 certified product.

Curing. After installation is completed, a suitable heat source and water recirculation or steam generation equipment are required to circulate heated water or steam throughout the pipe. The equipment shall be capable of delivering hot water or steam throughout the section to uniformly raise the water temperature above the temperature required to effect a cure of the resin. Water or steam temperature in the line during the cure period shall be as recommended by the resin manufacturer. The heat source shall be fitted with monitors to gauge the temperature of the incoming and outgoing water or steam supply. Another such gauge shall be placed between the impregnated tube and the pipe invert at the termination to determine the temperatures during cure.

Initial cure shall occur during temperature heat-up and be completed when exposed portions of the new pipe appear to be hard and sound and the remote temperature sensor indicates that the temperature is of a magnitude to realize an exotherm or cure in the resin. After initial cure is reached, the temperature shall be raised to the post-cure temperature recommended by the resin manufacturer. The post-cure temperature shall be held for a period as recommended by the resin manufacturer, during which time the recirculation of the water or steam and cycling of the boiler to maintain the temperature continues. The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of soil).

The Contractor shall provide logs of the pressure and temperature readings from the installation, cure, and post-cure periods.

Cool Down. The CIPP shall be cooled to a temperature below 100 degrees before relieving the hydrostatic head. Cool-down may be accomplished by the introduction of cool water into the CIPP to replace steam or water being drained from a small hole in the downstream end. Care shall be taken in the release of the static head so that a vacuum will not be developed that could damage the newly installed pipe.

Field Lining Samples. At the request of the Engineer, the Contractor shall furnish to the Engineer a sample of the lining within the host watermain up to 3 feet in length at any location or time. A minimum of two 3 foot long pipe samples per 3,000 feet of lined pipe shall be removed for inspection and for potential testing purposes. Immediately upon removal the Contractor shall give the samples into the custody of the Engineer. Where samples have been removed, the watermain shall be closed up with new pipe and fittings in accordance with the specifications.

When directed by the Engineer, the samples shall be tested in accordance with ASTM F1743-21 for Short-Term Flexural Properties, Short-Term Tensile Properties, CIPP Wall Thickness, and Delamination.

The Contractor shall provide for testing of the samples at a testing agency approved by the Engineer. The Contractor shall authorize the testing agency to forward the test reports to the Engineer and communicate with the Engineer concerning the testing and results. The Engineer will arrange for delivery of the samples to the testing agency.

The Village, with the Contractor's assistance, may from time to time sample resin from liners supplied for this Contract and may conduct Infrared Spectrophotometric analysis on each

resin sample. The Spectrograph shall be generated by the same test method as employed by the supplier to generate the benchmark scan that shall include all components that will be incorporated into the final resin mix used with the liners. The certified copy of the IR Spectrograph provided by the Contractor shall be the reference IR Spectrograph used for comparison with IR spectrographs of field samples. All field samples supplied for this Contract shall produce IR Spectrographs that correspond to the reference IR Spectrograph when tested under the same conditions.

All work associated with the sampling and testing requirements shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Pressure Tests. The Engineer and Village Representative shall be given 24 hours notice prior to the beginning of testing. Prior to reinstating services, the testing procedure shall be as shown in ASTM F1216-22 as follows: A pressure and leakage test shall be performed at twice the known working pressure or at the working pressure plus 50 psi, whichever is less. The pressure shall be for 2 to 3 hours to allow for stabilization of the liner. After this period, the pressure test shall begin for a minimum duration of 1 hour. The allowable leakage during the pressure test shall be 20 US gallons per inch of internal diameter per mile per day, providing that all air has been evacuated from the line prior to testing and the liner has cooled down to ambient temperature. The Village may exercise the right to continue the test to the maximum 4 hour duration. The Resident Engineer and Village Representative must be present and witness the duration of the test. If the water main being tested fails, the line shall be disassembled and reassembled at the point of failure. Repair clamps shall not be allowed on the water main as a means to correct any leaks. The Village may also exercise the right to supply to the Contractor a Village-owned pressure gauge which shall be used for any pre-tests and/or during the actual pressure test. All work required for testing (including, but not limited to, fittings, meters, pumps, gauges, whips) shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Reinstatement or Installation of Side Mains and Fire Hydrant Leads. The Contractor shall reconnect all existing mains and fire hydrant leads, unless they are shown to be abandoned, by removing and replacing the existing tee. Side mains are those mains that do not connect directly to a building. All fittings, solid sleeves, water main, trench backfill, and restoration required to reconnect or connect these mains and fire hydrant leads shall be included in the cost of CURED-IN-PLACE PIPE (CIPP). If the fire hydrant and lead are shown to be replaced or a new fire hydrant installed, the work to remove and replace the existing tee or install a new tee, including all fittings, solid sleeves, watermain, and trench backfill, shall be included in the cost of CURED-IN-PLACE PIPE (CIPP), but the new 6" watermain, fire hydrant, and restoration will be paid for separately.

Reinstatement of Service Connections – 2" or Less. For services 2" or less in diameter, the water service connections shall be reinstated from inside of the lined pipe, using a mechanical robot equipped with a camera and activated by an operator using a remote control and television unit. The robot shall be equipped with a drilling tool that allows the operator to drill a hole in the liner at the precise location of the connection. The service connection shall be opened to the full pre-existing flow opening size, including the removal of any resin slugging in or up the service connection that will impede flow. After opening the connections, the lined watermain shall be flushed clean, disinfected and restored to service.

If the manufacturer requires the installation of a mechanical fitting at the service, this work shall be included in the cost of WATER SERVICE RECONNECTIONS.

The Contractor will be fully responsible to locate and successfully reinstate the existing service connections, without damaging the lining. Any damage to the service connections or the lining caused by the reinstatement process will require immediate corrective action by the Contractor.

If the Contractor is unable to reinstate a service connection from the inside, a suitable excavation will be required to access the corporation stop and to disconnect the existing copper pipe and reconnect the copper piping with the Village's approved fitting. If the Contractor is unable to effectively reconnect the service connection to the Engineer's satisfaction, the Contractor shall be required to re-tap the watermain in accordance with the Village's standards and the liner manufacturer's recommendations. All restoration of the excavation site, including but not limited to trench backfill, backfill, topsoil, sod, concrete sidewalk, curb and gutter, driveway pavement replacement, or pavement patching, shall not be paid for separately but shall be included in the cost of WATER SERVICE RECONNECTIONS.

Should any services be partially or fully obstructed due to the ingress of liner resin or other foreign materials it shall be the Contractor's responsibility to remove such obstructions in a manner approved by the Engineer. The Contractor shall take precaution to minimize the number of plugged services needed to be cleared. The cost to clear plugged or obstructed services shall not be paid for, including all labor, material, tools and equipment for pavement removal, excavation and removing restrictions in corporation stops or services or replacing the corporation stop as ordered by the Engineer, reconnecting the service, backfilling and restoration.

The Village does not have records of which services are direct taps versus saddle taps. No additional compensation shall be allowed for the reinstatement of the services if the existing services are saddle taps and can not be reinstated from inside the main.

Reinstatement of Service Connections – Greater Than 2”. For services larger than 2” in diameter, the Contractor shall remove and replace the existing tee on the main. The existing service shall then be reconnected to the main in accordance with the special provision for WATER MAIN INSTALLATION, except that this work shall be included in the cost of WATER SERVICE CONNECTION. The existing valve on the service shall be removed and replaced when noted on the plans or when directed by the Engineer. This work shall be paid for separately as REMOVE EXISTING WATER VALVE and WATER VALVE, of the size indicated.

Leakage Test. After reinstatement of the fire hydrants and service connections, the Contractor shall conduct a leakage test in accordance with Section 41-2.14 of the Standard Specifications for Water & Sewer Construction in Illinois, 8th Edition.

If the measured leakage exceeds the allowable leakage, locations of new leakage shall be exposed by the Contractor and corrections made to the installation that meet the approval of the Engineer. Repair clamps shall not be allowed on the water main as a means to correct

any leaks. The Contractor shall then repeat the leakage test and perform all other corrections necessary until the measured leakage is less than the allowable leakage.

Final CCTV Inspection of Completed Liner. Upon completion of the lining of a watermain section, including all reinstatements of services, a CCTV inspection shall be performed and recorded. The CCTV recording and reports shall be submitted to the Engineer for approval. The Engineer shall use the CCTV submission as part of his or her process for approving the watermain liner installation. This work shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Close Up of Watermain After Lining Completion. Upon completion of the CIPP liner, the openings in the watermain shall be closed as soon as possible using ductile iron watermain pipe, approved couplings, and/or solid sleeves meeting the requirements of the special provision for WATER MAIN INSTALLATION contained herein, unless otherwise directed by the Engineer. Polyethylene encasement shall be installed before backfill of the close up location. At the limits of the project, when the lining ends outside of an existing valve vault, the watermain shall be replaced from the valve within the vault to the limits of the liner. This work, including the required restoration, shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Disinfection of Water Main. The Engineer and Village Representative shall be given 24 hours notice prior to the beginning of disinfection. The Resident Engineer and Village Representative must be present during the disinfection procedure. All work required for testing (including fittings and laboratory fees) shall be included in the cost of CURED-IN-PLACE PIPE (CIPP). The procedure shall be as outlined in the special provision WATER MAIN TESTING CLARIFICATION. All testing required as noted in the approved IEPA permit shall also be included in the cost of CURED-IN-PLACE PIPE (CIPP).

After the tests on all water samples have been approved, the watermain shall be flushed, water service connections restored, excavations backfilled, the watermain returned to service and the temporary service lines removed.

The Contractor shall satisfactorily restore the permanent property connections and leave streets, sidewalks and adjacent property in a neat and orderly condition. Any valves, corporation stops or other appurtenances which have been damaged due to cleaning and lining operations shall be replaced by the Contractor.

Restoration. The Contractor shall restore all areas disturbed as part of the lining of the watermain and reinstatement of the services. This shall include:

Parkways: All grassed areas shall be restored with 4" of topsoil meeting the requirements of the special provision "Section 211 Topsoil" and sod meeting the requirements of the special provision "Section 252 Sodding".

HMA Driveways: Existing asphalt driveways shall be restored with 4 inches of Hot-Mix Asphalt Surface Course, Mixture D, N50 placed on a minimum of 6 inches of compacted Aggregate Base Course, Type B. This work shall include the application of Bituminous Materials (Prime Coat) per the Standard Specifications and as directed by the Engineer.

Commercial PCC Driveways: Existing concrete driveways shall be restored with 8 inches of Class PV concrete placed on a minimum of 4 inches of Aggregate Base Course, Type B. The full width and length of existing concrete panels shall be removed and replaced unless otherwise approved by the Engineer. Jointing of the concrete shall match the existing joint locations.

PCC Pavement: Existing concrete pavement shall be restored with Class B patches placed on a minimum of 6 inches of Aggregate Base Course, Type B. The thickness shall match the thickness of the existing pavement. If the limit of the pavement removal is within 4 feet of an existing joint, this additional pavement shall be removed and replaced with the patch. The patching shall follow the requirements of Section 442 of the Standard Specifications and IDOT Highway Standard 442101 for Class B patches.

HMA Pavement: Existing asphalt pavement shall be restored with Class D patches placed on a minimum of 6 inches of Aggregate Base Course, Type B. The thickness shall match the thickness of the existing asphalt pavement. The patching shall follow the requirements of Section 442 of the Standard Specifications and IDOT Highway Standard 442201 for Class D patches. The patch material shall be Class D Patch (HMA Binder IL-19mm), 4% voids at 70 gyrations. This work shall include the application of Bituminous Materials (Prime Coat) per the Standard Specifications and as directed by the Engineer.

Combination Concrete Curb and Gutter: Existing curb and gutter removed, damaged, or undermined shall be restored with new combination concrete curb and gutter matching the type of existing curb and gutter and meeting the requirements of Section 606 of the Standard Specifications. The Engineer shall be the sole judge as to whether the curb and gutter requires replacement. The proposed curb and gutter shall be tied to the existing curb and gutter with 2-18" long, No. 4, epoxy coated dowel bars drilled and grouted into the existing curb and gutter. The curb and gutter shall be placed on a minimum of 6 inches of Aggregate Base Course, Type B.

Sidewalks: Existing sidewalks shall be restored in accordance with 5" of Portland Cement Concrete over 4" Subbase Granular Material, Type B. Curb ramps shall be installed in accordance with the IDOT Highway Standards. Detectable warnings shall be in accordance with the special provision for DETECTABLE WARNINGS (SPECIAL).

Restoration of all areas beneath paved surfaces, or within 2 feet of paved surfaces, shall include backfilling with trench backfill meeting the requirements of the special provision TRENCH BACKFILL. Restoration of all paved areas shall also include repair or replacement of the existing aggregate subbase (when required by the Engineer) and compaction of all exposed subbase.

Pavement Markings: The Contractor shall record the locations of existing pavement markings prior to removing pavement. The markings shall be replaced on the new pavement at the existing locations in accordance with Section 780 of these special provisions.

Raised Reflective Pavement Markers: The Contractor shall record the locations of existing raised reflective pavement markers prior to removing pavement. The markers shall be replaced on the new pavement at the existing locations in accordance with Section 781 of the Standard Specifications.

All disturbed driveways and sidewalks shall be temporarily restored with an aggregate surface meeting the approval of the Engineer in order to maintain access. The aggregate surface shall be constructed in accordance with the applicable portions of Section 402 of the Standard Specifications excepting that the coarse aggregate shall meet CA-6 gradation, and that the equipment required for the work will be as directed by the Engineer. Maintenance shall consist of placing and compacting additional aggregate of the same type and gradation as the surface aggregate. If the permanent replacement of the driveway or sidewalk will not occur within 4 weeks of the initial removal, the Contractor shall temporarily restore the driveways and sidewalks removed with a temporary HMA patch meeting the approval of the Engineer. The Contractor shall maintain the patch for the duration of the time that it is in place.

All work involved with the temporary and permanent restoration required for the watermain lining and reinstatement of the services shall be included in the cost of CURED-IN-PLACE PIPE (CIPP).

Operation of Valves and Hydrants. Village personnel shall operate all valves other than those installed but not yet accepted by the Village.

The Contractor will be required to keep and maintain a real time log book which logs the operation of any system valves (main line and bypass) found within the limits of the contract including but not limited to valves on the temporary bypass system. Such a log book is to be presented daily for copy and signature to the Engineer. The log book layout/format will be decided upon prior to the start of construction. Primarily the Contractor will be asked to record the address of the valve, the date, time and reason for operation, time opened and/or closed as appropriate, as well as the name of the individual operating the system valves.

Method of Measurement: Cure-in-place pipe shall be measured for payment in feet from the start of the liner to the end of the liner within each section of watermain lined. Water service connections and water service reconnections shall be measured for payment by count of active service connection laterals reinstated.

Basis of Payment: Water main lining shall be paid for at the contract unit price per foot for CURED-IN-PLACE PIPE (CIPP), of the diameter specified which price shall include all costs for labor, materials, equipment, and incidentals necessary to perform the work.

Reinstatement of active service connections 2" or less in diameter shall be paid for at the contract unit price per each for WATER SERVICE RECONNECTIONS, which price shall include all costs for labor, materials, equipment, and incidentals necessary to perform the work.

Reinstatement of active service connections larger than 2" in diameter shall be paid for at the contract unit price per each for WATER SERVICE CONNECTION, which price shall include all costs for labor, materials, equipment, and incidentals necessary to perform the work.

Quantities indicated on the Bid Proposal are estimated quantities. Every effort has been made to provide accurate information. However, field conditions may differ from information provided in these specifications. Payment shall be based on actual quantities provided in the execution of the work, as per the units defined in the Bid Proposal.

PLANTING WOODY PLANTS

This work shall consist of planting woody plants as specified in Section 253 of the Standard Specifications with the following revisions:

Delete Article 253.03 Planting Time and substitute the following:

Spring Planting. This work shall be performed between March 15th and May 31st except that evergreen planting shall be performed between March 15th and April 30th in the northern zone.

Add the following to Article 253.03 (a) (2) and (b):

All plants shall be obtained from Illinois Nurserymen's Association or appropriate state chapter nurseries. All trees and shrubs shall be dug prior to leafing out (bud break) in the spring or when plants have gone dormant in the fall, except for the following species which are only to be dug prior to leafing out in the spring:

- Red Maple (*Acer rubra*)
- Alder (*alnus* spp.)
- Buckeye (*Aesculus* spp.)
- Birch (*Betulus* spp.)
- American Hornbeam (*Carpinus caroliniana*)
- Hickory (*Carya* spp.)
- Eastern Redbud (*Cercis* spp.)
- American Yellowwood (*Cladrastis kentuckea* spp.)
- Corylus (*Filbert* spp.)
- Hawthorn (*Crataegus* spp.)
- Walnut (*Juglans* spp.)
- Sweetgum (*Liquidambar* spp.)
- Tuliptree (*Liriodendron* spp.)
- Dawn Redwood (*Metasequoia* spp.)
- Black Tupelo (*Nyssa sylvatica*)
- American Hophornbeam (*Ostrya virginiana*)
- Planetree (*Platanus* spp.)
- Poplar (*Populus* spp.)
- Cherry (*Prunus* spp.)
- Oak (*Quercus* spp.)
- Willow (*Salix* spp.)
- Sassafras (*Sassafras albidum*)
- Baldcypress (*Taxodium distichum*)
- Broadleaf Evergreens (all)
- Vines (all)

Fall Planting. This work shall be performed between October 1 and November 30 except that evergreen planting shall be performed between August 15 and October 15.

Planting dates are dependent on species of plant material and weather. Planting might begin or end prior or after above dates as approved by the Engineer. Do not plant when soil is muddy or during frost.

Add the following to Article 253.05 Transportation:

Cover plants during transport to prevent desiccation. Plant material transported without cover shall be automatically rejected. During loading and unloading, plants shall be handled such that stems are not stressed, scraped, or broken and that root balls are kept intact.

Delete the third sentence of Article 253.07 and substitute the following:

Trees must be installed first to establish proper layout and to avoid damage to other plantings such as shrubs and perennials.

The Contractor shall be responsible for all tree, shrub, and vine layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the use of an engineer's scale to determine dimensions.

Tree and shrub locations within each planting area shall be marked with different color stakes/flags and labeled to denote the different tree and shrub species.

Shrub and vine beds will first be marked out with flags to delineate the perimeter of the planting bed. Once the planting bed has been approved by the Roadside Development Unit, the perimeter shall be painted prior to the removal of the flags and turf. The removal of the existing turf will be by a method approved by the Engineer.

Prior to shrub, vine installation, all plants shall be placed above ground or planting locations clearly marked out.

All utilities shall have been marked prior to contacting the Roadside Development Unit. The Engineer will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to installation. Allow a minimum of seven (7) working days prior to installation for approval.

Delete the first paragraph to Article 253.08 Excavation of Plant Holes and substitute with the following:

Protect structures, utilities, sidewalks, bicycle paths, knee walls, fences, pavements, utility boxes, other facilities, lawns and existing plants from damage caused by planting operations. Excavation of the planting hole may be performed by either hand, machine excavator, or auger.

The excavated material shall not be stockpiled on turf, in ditches, or used to create enormous water saucer berms around newly installed trees or shrubs. Remove all excess excavated subsoil from the site and dispose as specified in Article 202.03.

Delete the second sentence of Article 253.08 Excavation of Plant Holes (a) and the third paragraph of Article 253.08(b) and substitute with the following:

Excavation of planting hole width. Planting holes for trees, shrubs, and vines shall be three times the diameter of the root mass and with 45-degree sides sloping down to the base of the root mass to encourage rapid root growth. Roots can become deformed by the edge of the hole if the hole is too small and will hinder root growth.

Planting holes dug with an auger shall have the sides cut down with a shovel to eliminate the glazed, smooth sides and create sloping sides.

Excavation of planting hole depth. The root flare shall be visible at the top of the root mass. If the trunk flare is not visible, carefully remove soil from around the trunk until the root flare is visible without damaging the roots. Remove excess soil until the top of the root mass exposes the root collar.

The root flare shall always be slightly above the surface of the surrounding soil. The depth of the hole shall be equal to the depth of the root mass minus one (1) inch allowing the tree or shrub to sit one (1) inch higher than the surrounding soil surface for trees that have a 1-inch caliper or smaller. The depth of the hole shall be equal to the depth of the root mass minus two (2) inches allowing the tree or shrub to sit two (2) inches higher than the surrounding soil surface for trees that have a 2-inch caliper or larger.

For stability, the root mass shall sit on existing undisturbed soil. If the hole was inadvertently dug too deep, backfill and recompact the soil to the correct depth.

Excavation of planting hole on slopes. Excavate away the slope above the planting hole to create a flattened area uphill of the planting hole to prevent the uphill roots from being buried too deep. Place the excess soil on the downslope of the planting hole to extend the planting shelf to ensure roots on the downhill side of the tree remain buried. The planting hole shall be three times the diameter of the root mass and saucer shaped. The hole may be a bit elongated to fit the contour of the slope as opposed to the typical round hole on flat ground.

Add backfill to create a small berm on the downhill portion of the planting shelf to trap water and encourage movement into the soil to increase water filtration around the tree. Smooth out the slope above the plant where you have cut into the soil so the old slope and the new slope transition together smoothly.

Add the following to Article 253.08 Excavation of Plant Holes (b):

When planting shrubs in shrub beds or vines in vine beds as shown on the plans or as directed by the Engineer, the Contractor will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to removing the existing turf. The removal of the existing turf will be by a method approved by the Engineer. Areas damaged outside the delineated planting beds shall be restored at the Contractor's expense.

Spade a planting bed edge at approximately a 45-degree angle and to a depth of approximately 3-inches around the perimeter of the shrub bed prior to placement of the

mulch. Remove any debris created in the spade edging process and dispose of as specified in Article 202.03.

Delete Article 253.09 (b) Pruning and substitute with the following:

Deciduous Shrubs. Shrubs shall be pruned to remove dead, conflicting, or broken branches and shall preserve the natural form of the shrub.

Delete the third and fourth paragraphs of Article 253.10 Planting Procedures and Article 253.10 (a) and substitute the following:

Approved watering equipment shall be at the immediate work site area and in operational condition PRIOR TO STARTING the planting operation and DURING all planting operations OR PLANTING WILL NOT BE ALLOWED.

All plants shall be placed in a plumb position and avoid the appearance of leaning. Confirm the tree is straight from two directions prior to backfilling.

Before the plant is placed in the hole, any paper or cardboard trunk wrap shall be removed. Check that the trunk is not damaged. Any soil covering the tree's root flare shall be removed to expose the crown prior to planting.

Check the depth of the root ball in the planting hole. With the root flare exposed, one-inch caliper trees shall be set one inch higher than the surrounding soil and two-inch and larger caliper trees shall be set two inches higher than the surrounding soil. The root flare shall always be slightly above the surface of the surrounding soil. For stability, the root ball shall sit on existing undisturbed soil. If the hole was inadvertently dug too deep, backfill and recompact the soil to the correct depth.

After the plant is placed in the hole, all cords and burlap shall be removed from the trunk. Remove the wire basket from the top three quarters (3/4) of the root ball. The remaining burlap shall be loosened and scored to provide the root system quick contact with the soil. All ropes or twine shall be removed from the root ball and tree trunk. All materials shall be disposed of properly.

The plant hole shall be backfilled with the same soil that was removed from the hole. Clay soil clumps shall be broken up as much as possible. Where rocks, gravel, heavy clay, or other debris are encountered, clean topsoil shall be used. Do not backfill excavation with subsoil.

The hole shall be 1/3 filled with soil and firmly packed to assure the plant remains in plumb, then saturated with water. After the water has soaked in, complete the remaining backfill in 8" lifts, tamping the topsoil to eliminate voids, and then the hole shall be saturated again. Maintain plumb during backfilling. Backfill to the edge of the root mass and do not place any soil on top of the root mass. Visible root flare shall be left exposed, uncovered by the addition of soil.

Add the following to Article 253.10 (b):

After removal of the container, inspect the root system for circling, matted or crowded roots at the container sides and bottom. Using a sharp knife or hand pruners, prune, cut, and loosen any parts of the root system requiring corrective action.

Delete the first sentence of Article 253.10(e) and substitute with the following:

Water Saucer. All plants placed individually and not specified to be bedded with other plants, shall have a water saucer constructed of soil by mounding up the soil 4-inches high x 8-inches wide outside the edge of the planting hole.

Delete Article 253.11 and substitute the following:

Individual trees, shrubs, shrub beds, and vines shall be mulched within 48 hours after being planted. No weed barrier fabric will be required for tree and shrub plantings.

The mulch shall consist of wood chips or shredded tree bark free not to exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. Mulch shall be aged in stockpiles for a minimum of four (4) months where interior temperatures reach a minimum of 140-degrees. The mulch shall be free from inorganic materials, contaminants, fuels, invasive weed seeds, disease, harmful insects such as emerald ash borer or any other type of material detrimental to plant growth. A sample must be supplied to the Roadside Development Unit for approval prior to performing any work. Allow a minimum of seven (7) working days prior to installation for approval.

Mulch shall be applied at a depth of 4-inches around all plants within the entire mulched bed area or around each individual tree forming a minimum 5-foot diameter mulch ring around each tree. An excess of 4-inches of mulch is unacceptable, and excess shall be removed. Mulch shall not be tapered so that no mulch shall be placed within 6-inches of the shrub base or trunk to allow the root flare to be exposed and shall be free of mulch contact.

Care shall be taken not to bury leaves, stems, or vines under mulch material. All finished mulch areas shall be left smooth and level to maintain uniform surface and appearance. After the mulch placement, any debris or piles of material shall be immediately removed from the right of way, including raking excess mulch out of turf areas in accordance with Article 202.03.

Pre-emergent Herbicide shall be used in the around the plant beds and tree rings after the placement of mulch. See specification for Weed Control, Pre-emergent Herbicide.

Delete Article 253.12 Wrapping and substitute the following:

Within 48 hours after planting, screen mesh shall be wrapped around the trunk of all deciduous trees with a caliper of 1-inch or greater. Multi-stem or clump form trees, with individual stems having a caliper of 1-inch or greater, shall have each stem wrapped separately. The screen mesh shall be secured to itself with staples or single wire strands tied to the mesh. Trees shall be wrapped at time of planting, before the installation of mulch. The

lower edge of the screen wire shall be in continuous contact with the ground and shall extend up to a minimum of 36-inches or to the lowest major branch, whichever is less. Replacement plantings shall not be wrapped.

Delete Article 253.13 Bracing and substitute with the following:

Unless otherwise specified by the Engineer, within 48 hours after planting all deciduous and evergreen trees, with the exception of multi-stem or clump form specimens, over 8-feet in height shall require three 6-foot long steel posts so placed that they are equidistant from each other and adjacent to the outside of the ball. The posts shall be driven vertically to a depth of 18-inches below the bottom of the hole. The anchor plate shall be aligned perpendicular to a line between the tree and the post. The tree shall be firmly attached to each post with a double guy of 14-gauge steel wire. The portion of the wire in contact with the tree shall be encased in a hose of a type and length approved by the Engineer.

During the life of the contract, within 72 hours the Contractor shall straighten any tree that deviates from a plumb position. The Contractor shall adjust backfill compaction and install or adjust bracing on the tree as necessary to maintain a plumb position. Replacement trees shall not be braced.

Delete the second sentence of the first paragraph of Article 253.14 Period of Establishment and substitute the following:

This period shall begin in April and end in November of the same year.

Delete the first paragraph of Article 253.15 Plant Care and substitute the following:

During the period of establishment, the Contractor shall properly care for all plants including weeding, watering, adjusting of braces, repair of water saucers, pruning, cultivating, tightening, and repairing supports, repair of wrapping, and furnishing and applying sprays as necessary to keep the plants free of insects and disease, or other work which is necessary to maintain the health and satisfactory appearance of the plantings. The Contractor shall provide plant care a minimum of every two weeks, or within 36 hours following notification by the Engineer. All requirements for plant care shall be considered as included in the cost of the contract.

Delete the first paragraph of Article 253.15 Plant Care (a) and substitute with the following:

During the period of establishment, watering (initial) shall be performed at least every 30 days following installation during the months of May through November and is included in the cost of the contract unit price per each for TREES, SHRUBS, or VINES, of the species, root type, and plant size specified. The Contractor shall apply per week a minimum of 15 gallons of water per tree, 10 gallons per large shrub, 5 gallons per small shrub, and 2 gallons per vine.

Additional watering will be done once a week (3 times a month) following installation during the months of May through November. Any required additional watering in between the regularly scheduled (initial) watering(s) will be paid for as Supplemental Watering.

Special consideration in determining water needs must be given during extreme weather conditions or if plants exhibit any signs of stress in between the regularly scheduled every thirty-day watering during the period of establishment. Water immediately if plants show signs of wilting or if top (1) inch to two (2) inches of soil is dry. Water to ensure that moisture penetrates throughout the root zone, including the surrounding soil, and only as frequently as necessary to maintain healthy growth. **Do not overwater.**

The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions. Should excess moisture prevail, the Engineer may delete any or all the additional watering cycles.

Add the following to Article 253.15 Plant Care (c):

The contractor shall correct any vine growing across the ground plane that should be growing up desired vertical element (noise wall, retaining wall, fence, knee wall, etc.). Work may include but is not limited to carefully weaving vines through fence and/or taping vines to vertical elements.

Add the following to Article 253.15 Plant Care (d):

The Contractor shall inspect all trees, shrubs, and vines for pests and diseases at least every two weeks during the months of initial planting through final acceptance. Contractor must identify and monitor pest and diseases and determine action required to maintain the good appearance, health, and top performance of all plant material. Contractor shall notify the Engineer with their inspection findings and recommendations within twenty-four (24) hours of findings. The recommendations for action by the Contractor must be reviewed and by the Engineer for approval/rejection. All approved corrective activities will be considered as included in the cost of the contract and shall be performed within thirty-six (36) hours following notification by the Engineer.

Add the following to Article 253.16 Method of Measurement:

Pre-emergent Herbicide will be measured for payment as specified in Weed Control, Pre-emergent Granular Herbicide.

Additional Watering will be measured for payment as specified in Supplemental Watering.

Delete Article 253.17 Basis of Payment and substitute the following:

This work will be paid for at the contract unit price per each for TREES, SHRUBS, or VINES, of the species, root type, and plant size specified, and per unit for SEEDLINGS. The unit price shall include the cost of all materials, equipment, labor, plant care, removal, disposal, and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer. Payment will be made according to the following schedule:

- (a) Initial Payment. Upon completion of planting, mulching, wrapping, and bracing, 75 percent of the pay item(s) will be paid.
- (b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third-party bond, the remaining 25 percent of the pay item(s) will be paid."
- (c) The placement of Pre-emergent Herbicide shall be paid for at the contract unit price for WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE.
- (d) Additional Watering will be paid for as specified in SUPPLEMENTAL WATERING.

PLANTING PERENNIAL PLANTS

Delete Article 254.04(a) Planting Time and substitute the following:

Bulbs shall be planted between October 15 and November 30. Bulbs shall not be installed prior to trees, shrubs, perennials, and ornamental grasses are planted.

Delete Article 254.06 Layout of Planting and substitute the following:

When plants are specified to be planted in prepared soil planting beds, the planting bed shall be approved by the Engineer prior to planting. The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the use of an engineer's scale to determine some dimensions. Bed limits shall be painted or flagged. Individual plants layout shall be marked prior to installation. The Engineer will approve the layout prior to installation. Allow a minimum of three (3) days prior to installation for approval.

Add the following to Article 254.07 Planting Procedures:

When planting perennials in bed areas shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

- Spade a planting bed edge at approximately a 45 degree angle and to a depth of approximately three (3) inches around the perimeter of the perennial bed. Remove any debris created in the spade edging process and dispose of as specified in Article 202.03.
- Do not plant when soil is muddy.
- Trees and shrubs must be installed first to establish proper layout and to avoid damage to other plantings.

- Perennial plants shall be planted by a hand method approved by the Engineer. Open holes sized to accommodate roots, place plants so it is level with the surrounding soil and backfill with soil, working carefully to avoid damage to roots and to leave no voids. Build up a small water basin of soil around each plant.
- Thoroughly water plant beds within 2 hours of installation. Do not wash soil onto crowns of plants.

Delete the first sentence of Article 254.08 Mulching and substitute the following:

Within 24 hours, the entire perennial plant bed shall be mulched with two (2) inches of fine grade Shredded Hardwood Bark Mulch. Hardwood bark mulch shall be clean, finely shredded mixed-hardwood bark not to exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. All hardwood mulch shall be processed through a hammer mill. Hardwood bark not processed through a hammer mill shall not be accepted. A mulch sample shall be submitted to the Engineer for approval seven (7) days prior to placing.

Care shall be taken to place the mulch to form a saucer around each perennial so as not to smother the plants or bury leaves, stems or vines under mulch material.

Delete Article 254.08 (b) Period of Establishment and substitute the following:

Perennial plants must undergo a 30-day period of establishment. Additional watering shall be performed not less than once a week for four weeks following installation. Any signs of stress exhibited by plant material must be given special consideration in determining water needs. Water immediately if plants begin to wilt, or if top (1) inch to two (2) inches of soil is dry. Water shall be applied at the rate of a minimum of 2 gallons per square foot. Water to ensure that moisture penetrates throughout the root zone, including the surrounding soil, and only as frequently as necessary to maintain healthy growth. **Do not over water.**

Should excess moisture prevail, the Engineer may delete any or all of the additional watering cycles. In severe weather, the Engineer may require additional watering.

Water must be applied in such a manner so as not to damage plant material. Water must trickle slowly into soil and completely soak the root zone. An open end hose is unacceptable. Water early in the day and apply water as close to the soil as possible without washing out soil or mulch. Water at the base of the plant to keep as much water as possible off plant leaves in order to minimize fungus problems. Watering of plants in beds shall be applied in such a manner that all plant holes are uniformly saturated without allowing water to flow beyond the periphery of the bed. Thoroughly saturate all areas of the perennial bed, not just individual plants. The plants to be watered and the method of application will be approved by the Engineer.

The Contractor will not be relieved in any way from the responsibility for unsatisfactory plants due to the amount of watering. Any loss of newly installed plant material determined by the Engineer to be due to lack of water, is the responsibility of the contractor to replace at no

additional cost. Any damage to plant material due to incorrect watering must be corrected or replace at the Contractors expense, to the satisfaction of the Engineer.

Add the following Article 254.09 Period of Establishment:

During the period of establishment, weeds and grass growth shall be removed from within the mulched perennial beds. This weeding shall be performed a minimum of once per week or within 48 hours following notification by the Engineer during the 30-day period of establishment. The Contractor will not be relieved in any way from the responsibility for unsatisfactory plants due to the extent of weeding.

The weeding may be performed in any manner approved by the Engineer provided the weed and grass growth, including their roots and stems, are removed from the area specified. Mulch disturbed by the weeding operation shall be replaced to its original condition. All debris that results from this operation must be removed from the right-of-way and disposed of at the end of each day in accordance with Article 202.03.

Add the following to Article 254.10 Method of Measurement:

- a) Disposal of weeds, sod and debris (rock, stones, concrete, bottles, plastic bags, etc.) removed from the perennial planting bed as specified in Article 202.03.

Add the following to Article 254.11 Basis of Payment:

- a) Payment for Shredded Mulch shall be included in contract unit price of the perennial plant pay item.
- b) The unit price shall include the cost of all materials, equipment, labor, plant care, removal, disposal and incidentals required to complete the work as specified herein and to the satisfaction of the Engineer.

SUPPLEMENTAL WATERING

This work will include watering sod, trees, shrubs, vines, and perennials at the rates specified and as directed by the Engineer.

Schedule: Watering will only begin after the successful completion of all period of establishment requirements. Water trees, shrubs, and vines every 7 days throughout the growing season (April 1 to November 30). Water perennials, plugs, and sod a minimum of twice a week. The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 24 hours of notice. **The Contractor shall give an approximate time window of when they will begin at the work location to the Engineer. The Engineer shall be present during**

the watering operation. A minimum of 10 units of water per day must be applied until the work is complete.

Should the Contractor fail to complete the work on a timely basis or within such extended times as may have been allowed by the Department, the Contractor shall be liable to the Department liquidated damages as outlined in the **“Failure to Complete Plant Care and Establishment Work on Time” special provision.**

In fixing the damages as set out herein, the desire is to establish a mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of the trees if the watering is delayed. The Department shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is every day shown on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later.

Source of Water: The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth.

Rate of Application: The normal rates of application for watering are as follows. The Engineer will adjust these rates as needed depending upon weather conditions.

- 35 gallons per tree
- 25 gallons per large shrub
- 15 gallons per small shrub
- 4 gallons per vine
- 3 gallons per perennial plant (Gallon)
- 2 gallons per perennial plant (Quart)
- 2 gallons per perennial plant (Plug)
- 27 gallons per square yard for Sodded Areas

Method of Application: A spray nozzle that does not damage small plants must be used when watering all vegetation. Water shall be applied at the base of the plant to keep as much water as possible off plant leaves. An open hose may be used to water trees, shrubs, and seedlings if mulch and soil are not displaced by watering. The water shall be applied to individual plants in such a manner that the plant hole shall be saturated without allowing the water to overflow beyond the earthen saucer. Watering of plants in beds shall be applied in such a manner that all plant holes are uniformly saturated without allowing the water flow beyond the periphery of the bed. Water shall slowly infiltrate into soil and completely soak the root zone. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

Method of Measurement: Supplemental watering will be measured in units of 1000 gallons of water applied as directed.

Basis of Payment: This work will be paid for at the contract unit price per unit of SUPPLEMENTAL WATERING, measured as specified. Payment will include the cost of all water, equipment and labor needed to complete the work specified herein and to the satisfaction of the Engineer.

TRASH RECEPTACLES

Description. This work shall consist of furnishing and installing new trash receptacles at the locations specified in the Contract plans or as directed by the Engineer.

General Requirements. Each trash receptacle will be placed at the location indicated in the plans. The locations will be field marked and verified for approval by the Engineer.

Materials. Materials must be as specified in the plans and must be "black" in color, by the following manufacturer:

Victor Stanley, Inc

Model: SD-35 Ironsites Series

Color: Black

Size: 24 gallon

Options: side-door opening with standard tapered formed lid and keyed lock box

Installation must be completed in accordance to manufacturer's specifications. Receptacles to be installed on concrete.

Submittals. Submit manufacturer's technical data for each manufactured product, including certification that each product complies with specified requirements. Submit shop drawings showing complete information for fabrication. Include anchoring/installation detail.

Contractor shall submit a 4" x 6" finish sample of metal in black.

Basis of Payment. This work will be paid for at the contract unit price per EACH for TRASH RECEPTACLES.

PLANTING SOIL MIX FURNISH AND PLACE

Description. Work under this item shall consist of furnishing all of the labor, tools, equipment and materials necessary to furnish, deliver and install planting soil at the locations specified in the Contract plans or as directed by the Engineer.

General Requirements. Planting soil mix will be installed within the masonry wall planters. Planting soil mix will be a growing medium that supports tree and plant growth, and laboratory testing of supplied soil is necessary to determine adherence to specified soil mix design.

Materials:

Planting soil mix is synonymous with growing medium. An amended existing topsoil that contains organic matter is capable of sustaining vigorous plant growth, contains a typical clay content of <18% by mass and is free from unwanted matter such as:

1. Stones, rock and pebbles in accordance with the specifications listed,
 2. Hard clods or objects in accordance with the specifications listed,
 3. Roots in accordance with the specifications listed,
 4. Sticks and rubbish,
 5. Material toxic to plants
 6. Materials that may pose a danger to human health, e.g. glass, hard plastic.
- A. Planter soils need to be friable and non-plastic during placement and installation. To help maintain a free-flowing soil, soil texture and moisture content are critical soil properties.
- B. Planting Soil shall meet the following requirements,
1. Purity: Free of pests, disease, and fungus.
 2. Foreign matter: On visual inspection, free from non-soil material, brick and other building materials and wastes, sharps, hydrocarbons, plant matter, weed roots, stolon's, rhizomes, and any other foreign matter or material or substance that would render the soil or soil ameliorant unsuitable for horticultural use.
 3. Contamination: Do not use soils contaminated with rubbish or other materials that are:
 - a. Corrosive, explosive or flammable.
 - b. Hazardous to human or animal life.
 - c. Detrimental to healthy plant growth.
- C. Planting Soil shall meet the following performance requirements,

Parameter	Unit	Lower Limit	Upper Limit
pH Value (<i>Optimal pH is highly dependent on the tree species to be planted and should be tested and adjusted based on species prior to planting.</i>)	Unit	5.5	8.5
Organic Material	% / weight	4.0	8.0
Clay <10% clods from 1" – 3" (250 mm - 750 mm) <5% clods 3" – 6" (75 mm - 150 mm)	% / weight	5.0	18.0

Silt	% / weight	5.0	30.0
Sand <25% <i>fine sand</i>	% / weight	50.0	80.0
Stones ¼" to ½" (60mm to 125 mm)	% / dry weight	0.0	5.0
Stones ½" to 1" (125 mm to 250 mm)	% / dry weight	0.0	5.0
Stones >1" (25 mm) <i>in the longest dimension</i>	% / dry weight	0.0	0.0
Debris <1" (25 mm) <i>in the longest dimension</i>	% / weight	0.0	5.0

Submittals:

A. Test and Evaluation Reports:

- 1.. Submit required soil test analysis report for each sample of planting soil mixes from an approved soil-testing laboratory as follows:
 - a. If tests fail to meet the Specifications, obtain other sources of material, retest and resubmit until accepted by the Engineer.
 - b. All testing shall be performed following the requirements of Methods of Soil Analysis, The Soil Science Society of America.
2. Soil-testing laboratory shall provide tests and prepare test reports for all tests performed. Submit copies of test reports to the Engineer immediately upon their becoming available.
3. All soil testing costs shall be included in the cost of PLANTING SOILL MIX FURNISH AND PLACE.

B. Supplier Qualifications:

1. Soil Supplier: Planting soil mixes shall be supplied by a firm that specializes in the production of mixes of planting soils and have at least 5 years' experience in providing planting soil mixes soils to projects of similar size and scope to this Work.
2. Submit documentation of the qualifications of the planting soil supplier and their field supervisor, sufficient to demonstrate that both meet the requirements of this specification.
3. Submit list of completed projects of similar scope and scale demonstrating capabilities and experience.

C. Testing Agency

1. Testing agency shall have an established track record in testing the type of soil required by this specification and shall have soils testing facilities and personnel capable of performing the physical and chemical testing required by this specification. Testing agency personnel shall be experienced in soil mix design and in making soil recommendations.
2. Test materials in accordance with specified standard listed below. In the absence of a specified standard, comply with the relevant ASTM standard.
3. Test Reports: Testing agency shall prepare test reports for all tests performed. Submit copies of test reports to Consultant immediately upon their becoming available.

Installation.

DELIVERY, STORAGE & HANDLING

A. Bulk Materials:

1. When filler soil is being loaded, ensure that loading equipment does not pick up underlying material and that tires and tracks do not till other material into the mix.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Protect stockpiled material from rain, wind erosion and other detrimental weather effects.
4. Do not move or handle materials when they are wet or frozen.

GENERAL

- A. Verify that planting soil meets specifications.
- B. Verify that the masonry wall planter installation has been completed and approved by the Engineer.
- C. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, asphalt/concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, solid waste, or acid has been deposited in planting soil.
- D. Proceed with placement of planting soil only after unsatisfactory conditions have been corrected.

INSTALLATION

- A. Place planting soil in the planters in $\leq 12"$ (300 mm) lifts or layers.
- B. Compaction: Compact each lift of soil media to ~70 percent of maximum Standard Proctor density according to ASTM D 698
- C. Finish Grading: Grade soil media so that it matches grades indicated on drawings. Rake to remove ridges, and fill depressions to meet finish grades.

CLEANING & PROTECTION

- A. Perform cleaning during the installation of work and upon completion of the work.
- B. Remove from site all excess materials, debris, and equipment. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

Method of Measurement. This work will be measured in place and the volume computed as CUBIC YARD for PLANTING SOIL MIX FURNISH AND PLACE.

Basis of Payment. This work will be paid for at the contract unit price per CUBIC YARD for PLANTING SOIL MIX FURNISH AND PLACE and shall include all the material, labor, equipment, and all incidental work necessary to perform the work described above.

ORNAMENTAL FENCE

Description. This work includes furnishing and installing steel ornamental metal fencing (attachment brackets, caps, pickets, posts and rails) including preparation, cleaning and painting of all metal work, fastening and all related work, complete as shown on drawings and as specified.

General.

Shop Drawings: Show location of fencing, posts, brackets, attachment methods and details.

Welding and cutting must be in accordance with the Standard Code for Arc and Gas Welding of the American Welding Society. Welding must be done in a manner that will prevent permanent buckling in the finished work. Certified welders using E 70xx electrodes must do the welding. All welds and spatter must be ground smooth prior to coating with galvanizing primer and finished with epoxy enamel.

Quality Assurance

Installer Qualifications: Engage an experienced Installer who has substantial experience and has completed at least five fence projects with similar material and scope to that indicated for this Project with a successful construction record of in-service performance.

Project Conditions

Field Measurements: Verify layout information for fencing shown on the Drawings in relation to the property survey and structures. Verify dimensions by field measurements.

Products

Steel Fencing Materials: Use only materials that are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness.

Steel must meet the requirements of ASTM Specification A-36.

1/2" x 1/2" solid bar pickets and 2" tall x 1" wide punched channel rail must meet the requirements of ASTM Specification A-108, cold finished, mild steel.

Square fence post must meet the requirements of ASTM Specification A-570.

Cap Detail must conform to design as specified on drawings.

Form fencing of welded construction to forms and profiles indicated; provide for field.

Form exposed work true to line and level with accurate angles and surfaces and straight edges. Weld corners and seams continuously, complying with AWS recommendations. Grind exposed welds smooth and flush to match and blend with adjoining surfaces.

Provide for anchorage of panels to posts using tamper proof bolts with 1/4" exposed threads, max. All hardware to be painted black to match fence.

Miscellaneous Items: This specification is intended to include complete fence materials, and the Contractor must furnish all necessary bolts, nuts, latches, fittings, and connections necessary to securely and rigidly install the fence. Color must be black. All materials to be the same color; black.

Finish.

Manufactured in compliance with ASTM F2408 - Corrosion Resistance Salt Spray Test per ASTM B117, Impact Resistance per ASTM D2794, and Adhesion per ASTM D3359 Method B.

All primary components shall receive a thorough cleaning and pre-treatment with a 10-step process: Hot alkaline cleaner, clear water rinse, hot iron phosphate application, clear water rinse, reverse Osmosis rinse, dry off oven heat, zinc enriched powder primer coat at 2-4 mils., gel oven heat, Ultra polyester finish T.G.I.C. powder coat at 2-4 mils., and final curing oven.

Color: Black

Execution

Submittals

The following items must be submitted to the Engineer for approval before production can begin:

Complete manufacturer's shop drawings.

Specifications and color sample for all coatings.

Individual piece samples and full mock-up of fence segment. Samples must include the post, fence segment, post cap, and tamper-proof bolts.

Install fencing plumb, level, true to line and location, and secure.

Cleaning

Clean connections and abraded areas and apply two (2) coats of repair paint compatible with finish preparation utilized. Apply primer and finish paint according to manufacturer's directions. Match original color.

Disposal

All excess excavated and unsuitable material is to be legally disposed of offsite.

Method of Measurement. This work will be measured for payment in place in feet along the top of the fence connection to column to connection to column.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for ORNAMENTAL FENCE.

**MASONRY COLUMN, LARGE
MASONRY COLUMN, SMALL**

Description. Work under this item shall consist of furnishing all of the labor, tools, equipment and materials necessary to furnish, deliver and install a masonry column with reinforced concrete core & footing, stone veneer and natural limestone cap at locations specified in the Contract plans or as directed by the Engineer.

General Requirements. Each masonry column will be placed at the location indicated in the plans. The locations will be field marked and verified for approval by the Engineer.

Materials:

Cast in place concrete core/footing: IDOT Class SI concrete per Article 1020 of the Standard Specifications.

Reinforcement: Epoxy coated reinforcement bars per Article 1006.10 of the Standard Specifications.

Subbase granular material: Type B in accordance with Section 311 of the Standard Specifications.

Stainless Steel dowels: Shall match dimensions as indicated on drawings.

Stone Veneer:

70% Brookfield full color limestone 2"-6" (no bright Orange/Buff)

30% Split edge bedface (Light Gray to Dark Gray with Blue Undertones Lannon) 5"-12" No Black

Stone pattern shall have the full color limestone mixed evenly between the two face styles and the Split edge bedface shall be mixed in randomly along the wall.

All joints shall be concave mortar joints. Mortar color: medium grey

All exposed sides of wall shall be faced with stone veneer.

Stone veneer color and texture shall match the landscape walls found at the Southwest corner of Waukegan Rd and Glenview Rd in Glenview, IL

Contractor to submit samples of each stone type for review and approval by the Engineer.

Anchoring/mounting hardware: Masonry anchors shall be galvanized, 12" o.c.

Limestone Units and Cap:

Material: Indiana Limestone

Color: Buff

Texture: Standard

Note: Color and texture classification as established by Indiana Limestone Institute, Inc.

Size: All Units and caps to follow dimensions as shown on drawings.

All limestone unit joints shall be concave 1/2" mortar joints

Mortar color: Medium grey

All Limestone Cap joints to be constructed as shown on drawings and comprised of a 1/2" compressible filler, bond breaker and NP1 polyurethane sealant, color to match mortar joints.

Limestone to comply with ASTM C568, classified as category II (medium density).

All cut limestone shall comply with thicknesses and dimensions shown on drawings and noted here. Cut joints are to be straight and at 90 degree angles to faces unless otherwise noted. Cut stones are to produce joints in uniform widths.

Obtain limestone from a single quarry source with resources to provide materials of specified consistent quality. The fabricator and the quarry shall have sufficient capacity to quarry, cut, and deliver the stonework on schedule. Both fabricator and quarry must be members in good standing of Indiana Limestone Institute.

Adhesives: High strength multi-purpose weather resistant polyurethane construction adhesive suitable for bonding concrete, stone and metal.

Submittals:

The following items shall be submitted by the Contractor for approval by the Engineer:

Shop drawings illustrating all components of the masonry columns, including stone veneer, limestone units and limestone caps. Shop drawings for limestone units and caps shall be

furnished by the limestone producer for approval by the Engineer. These drawings shall show complete design, installation and construction information in such detail as to enable the Engineer to determine the adequacy of the proposed units for the intended purpose. The drawings must demonstrate that the design will comply with all applicable federal, state and local structural codes and standards. Installation and construction information shall be included on shop drawings. Shop drawings showing the layout and details of concrete footings and steel reinforcement size and placement shall be included and shall be signed and sealed by a Structural Engineer licensed in the State of Illinois.

Anchorage, lifting inserts and devices: The Contractor shall produce product data sheets and installation instructions. The safe working load shall be clearly indicated.

For items including, but not limited to sealants, gaskets, connections, and other items, the Contractor shall provide product data and cut sheets for review.

24"x24" samples of the stone veneer and mortar color for approval by the Engineer.

8"x8" samples of the limestone units and cap for approval by the Engineer.

Assembly:

Stone Veneer, limestone units and cap sections shall be delivered to the project site clearly marked for proper identification. Items shall be protected from damage during delivery, storage and handling, and delivered to site when supporting concrete construction is completed and prepared for stone veneer and limestone installation. Products are to be stored in a clean, dry area in original, unopened containers and packaging until installation.

Field measurements: Contractor shall verify the dimensions of all supporting construction by field measurement before fabrication of limestone units and caps, and indicate measurements on shop drawings. Contractor shall coordinate fabrication schedule with construction progress to avoid delaying the Work. Cast in place concrete core and footing shall cure in place for a minimum of 14 days prior to installation of stone veneer, limestone units and limestone cap.

Joints shall be sealed in-place after limestone cap sections are installed.

Basis of Payment. This work will be paid for at the contract unit price per EACH for MASONRY COLUMN, LARGE and MASONRY COLUMN, SMALL. Excavation and suitable backfilled required for installation of the wall, footing, and subbase shall be included in the cost of MASONRY COLUMN, LARGE and MASONRY COLUMN, SMALL.

BENCHES

Description. This work shall consist of furnishing and installing new benches at the locations specified in the Contract plans or as directed by the Engineer.

General Requirements. Each bench will be placed at the location indicated in the plans. The locations will be field marked and verified for approval by the Engineer.

Materials. Materials must be as specified in the plans and must be “black” in color, steel benches in 6ft lengths by the following manufacturer:

Victor Stanley, Inc.

Model: CR-10
Color: Black

Installation must be completed in accordance to manufacturer’s specifications. Benches to be surface mounted.

Benches shall be shimmed to be level – to the extent possible and as recommended by the manufacturer.

Submittals:

Submit manufacturer’s technical data for each manufactured product, including certification that each product complies with specified requirements. Submit shop drawings showing complete information for fabrication. Include anchoring/installation detail.

Contractor shall submit a 4” x 6” finish sample of metal in black.

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

MASONRY WALL

Description. Work under this item shall consist of furnishing all of the labor, tools, equipment and materials necessary to furnish, deliver and install a masonry seat wall with reinforced concrete core & footing, stone veneer, and natural limestone cap at locations specified in the Contract plans or as directed by the Engineer.

General Requirements. Each masonry wall will be placed at the location indicated in the plans. The locations will be field marked and verified for approval by the Engineer.

Materials.

Cast in place concrete core/footing: IDOT Class SI concrete per Article 1020 of the Standard Specifications.

Reinforcement: Epoxy coated reinforcement bars per Article 1006.10 of the Standard Specifications.

Subbase granular material. Type B in accordance with Section 311 of the Standard Specifications.

Stainless Steel dowels. Shall match dimensions as indicated on drawings.

Stone Veneer:

70% Brookfield full color limestone 2"-6" (no bright Orange/Buff)

30% Split edge bedface (Light Gray to Dark Gray with Blue Undertones Lannon) 5"-12" No Black

Stone pattern shall have the full color limestone mixed evenly between the two face styles and the Split edge bedface shall be mixed in randomly along the wall.

All joints shall be concave mortar joints. Mortar color: medium grey.

All exposed sides of wall shall be faced with stone veneer.

Stone Veneer color and texture shall match the landscape walls found at the Southwest corner of Waukegan Rd and Glenview Rd in Glenview, IL

Contractor to submit samples of each stone type for review and approval by the Engineer.

Anchoring/mounting hardware: Masonry anchors shall be galvanized, 12" o.c.

Limestone Units and Cap:

Material: Indiana Limestone

Color: Buff

Texture: Standard

Note: Color and texture classification as established by Indiana Limestone Institute, Inc.

Size: All Units and caps to follow dimensions shown on drawings

All limestone unit joints shall be concave 1/2" mortar joints

Mortar color: Medium grey

All Limestone Cap joints to be constructed as shown on drawings and comprised of a 1/2" compressible filler, bond breaker and NP1 polyurethane sealant, color to match mortar joints.

Limestone to comply with ASTM C568, classified as category II (medium density).

All cut limestone shall comply with thicknesses and dimensions shown on drawings and noted here. Cut joints are to be straight and at 90 degree angles to faces unless otherwise noted. Cut stones are to produce joints in uniform widths.

Obtain limestone from a single quarry source with resources to provide materials of specified consistent quality. The fabricator and the quarry shall have sufficient capacity to quarry, cut, and deliver the stonework on schedule. Both fabricator and quarry must be members in good standing of Indiana Limestone Institute.

Adhesives: High strength multi-purpose weather resistant polyurethane construction adhesive suitable for bonding concrete, stone and metal.

Submittals:

The following items shall be submitted by the Contractor for approval by the Engineer:

Shop drawings illustrating all components of the masonry wall including stone veneer and limestone caps. Shop drawings for limestone units and caps shall be furnished by the limestone producer for approval by the Engineer. These drawings shall show complete design, installation and construction information in such detail as to enable the city to determine the adequacy of the proposed units for the intended purpose. The drawings must demonstrate that the design will comply with all applicable federal, state and local structural codes and standards. Installation and construction information shall be included on shop drawings. Shop drawings showing the layout and details of concrete footings and steel reinforcement size and placement shall be included and shall be signed and sealed by a Structural Engineer licensed in the State of Illinois.

Anchorage, lifting inserts and devices: The Contractor shall produce product data sheets and installation instructions. Safe working loads shall be clearly indicated.

For items including, but not limited to sealants, gaskets, connections, and other items, the Contractor shall provide product data and cut sheets for review.

24"x24" samples of the stone veneer and mortar color for approval by the Engineer.

8"x8" samples of the limestone cap for approval by the Engineer.

Assembly:

Stone veneer and cap sections shall be delivered to the project site clearly marked for proper identification. Items shall be protected from damage during delivery, storage and handling, and delivered to site when supporting concrete construction is completed and prepared for stone veneer and limestone installation. Products are to be stored in a clean, dry area in original, unopened containers and packaging until installation.

Field measurements: Contractor shall verify the dimensions of all supporting construction by field measurement before fabrication of stone veneer and caps, and indicate measurements on shop drawings. Contractor shall coordinate fabrication schedule with construction progress to avoid delaying the Work. Cast in place concrete core and footing shall cure in place for a minimum of 14 days prior to installation of stone veneer and limestone cap.

Masonry wall top is to be level. Base of walls can vary with grades. Exposed concrete foundation at base of wall must be 0.25" min above finished grade, with a maximum exposure of 1". Contractor to supply shop drawings for review and approval by the Engineer.

Joints shall be sealed in-place after limestone cap sections are installed per the details.

Method of Measurement. This work will be measured in place in feet along the centerline of the masonry wall.

Basis of Payment. This work will be paid for at the contract unit price per FOOT for MASONRY WALL. Excavation and suitable backfill required for installation of the wall, footing, and subbase shall be included in the cost of MASONRY WALL.

DECORATIVE PANEL

Description. Work under this item shall consist of furnishing all of the labor, tools, equipment and materials necessary to furnish, deliver and install a natural limestone engraved decorative panel at locations specified in the Contract plans or as directed by the Engineer.

Type 1 panels shall be rectangular in shape. Type 2 panels shall be square in shape.

General Requirements. Each engraved limestone decorative panel will be placed at the location indicated in the plans. The engraving is to be done using computer guided template cutting equipment following artwork to be provided by the Village. Final locations will be field marked and verified for approval by the Engineer.

Materials:

Anchoring/mounting hardware: Masonry anchors shall be galvanized, 12" o.c.

Limestone:

Material: Indiana Limestone

Color: Buff

Texture: Standard

Note: Color and texture classification as established by Indiana Limestone Institute, Inc.

Size: Limestone decorative panel sizes to follow dimensions shown on drawings. Final size and placement of engraved artwork is to follow design files that will be provided by the Village showing fonts, village seal and other artwork elements.

All limestone unit joints shall be concave 1/2" mortar joints

Mortar color: Medium grey

Limestone to comply with ASTM C568, classified as category II (medium density).

All cut limestone shall comply with thicknesses and dimensions shown on drawings and noted here. Cut joints are to be straight and at 90 degree angles to faces unless otherwise noted. Cut stones are to produce joints in uniform widths.

Obtain limestone from a single quarry source with resources to provide materials of specified consistent quality. The fabricator and the quarry shall have sufficient capacity to quarry, cut, and deliver the stonework on schedule. Both fabricator and quarry must be members in good standing of Indiana Limestone Institute.

Engraving: Engraving will be done utilizing computer guided template cutting equipment. The Village will provide final artwork. Engraving is to be a minimum of 1/2" depth and engraved cavities shall be filled with an epoxy resin in black color.

Adhesives: High strength multi-purpose weather resistant polyurethane construction adhesive suitable for bonding concrete, stone and metal.

Submittals:

The following items shall be submitted by the Contractor for approval by the Engineer:

Shop drawings illustrating all components of the engraved limestone decorative panel, including placement of artwork and engraving process. Shop drawings for limestone decorative panels shall be furnished by the limestone producer for approval by the Engineer. These drawings shall show complete design, installation and construction information in such detail as to enable the Engineer to determine the adequacy of the proposed units for the intended purpose. Installation and construction information shall be included on shop drawings.

Anchorage, lifting inserts and devices: The Contractor shall produce product data sheets and installation instructions. Safe working loads shall be clearly indicated.

For items including, but not limited to sealants, gaskets, connections, and other items, the Contractor shall provide product data and cut sheets for review.

8"x8" samples of the limestone decorative panel for approval by the Engineer.

Assembly:

Limestone decorative panels shall be delivered to the project site clearly marked for proper identification. Items shall be protected from damage during delivery, storage and handling, and delivered to site when supporting construction is completed and prepared for limestone installation. Products are to be stored in a clean, dry area in original, unopened containers and packaging until installation.

Field measurements: Contractor shall verify the dimensions of all supporting construction by field measurement before fabrication of stone veneer and caps, and indicate measurements on shop drawings. Contractor shall coordinate fabrication schedule with construction progress to avoid delaying the Work. Cast in place concrete core and footing shall cure in place for a minimum of 14 days prior to installation of limestone decorative panels.

Joints shall be sealed in-place after limestone decorative panels are installed.

Method of Measurement. This work will be measured in square feet of panel installed.

Basis of Payment. This work will be paid for at the contract unit price per square foot for DECORATIVE PANEL of the type specified.

FAILURE TO COMPLETE PLANT CARE AND ESTABLISHMENT WORK ON TIME

Should the Contractor fail to complete the plant care and/or supplemental watering work as per the standard specifications or within 36 hours notification from the Engineer, or within

such extended times as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of:

- \$50.00 per tree/per day
- \$40.00 per large shrub/per day
- \$35.00 per small shrub/per day
- \$20.00 per vine/per day
- \$20.00 per perennial/per day
- \$20.00 per sq yd sod/per day

not as penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

In fixing the damages as set out herein, the desire is to establish a mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of the tree(s) if the watering or plant care is delayed. The Department shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is every day shown on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later.

WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE

Effective: July 29, 2002

Revised: February 7, 2007

Description: This work shall consist of spreading a pre-emergent granular herbicide in place of weed barrier fabric in areas as shown on the plans or as directed by the Engineer. This item will be used in mulched plant beds and mulch rings.

Delete Article 253.11 and substitute the following:

Within 48 hours after planting, mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 4 inches (100 mm). No weed barrier fabric will be required for tree and shrub planting. Pre-emergent Herbicide will be used instead of weed barrier fabric. The Pre-emergent Herbicide shall be applied prior to mulching. Mulch shall not be in contact with the base of the trunk.

Materials: The pre-emergent granular herbicide (Snapshot 2.5 TG or equivalent) shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least seventy-two (72) hours prior to application.

Method: The pre-emergent granular herbicide shall be used in accordance with the manufacturer's directions on the package. The granules are to be applied prior to mulching.

Apply the granular herbicide using a drop or rotary-type designed to apply granular herbicide or insecticides. Calibrate application equipment to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the granular herbicide at the rate of 100 lbs/acre (112 kg/ha) or 2.3 lbs/1000 sq. ft. (11.2 kg/1000 sq. meters).

Method of Measurement: Pre-emergent granular herbicide will be measured in place in Pounds (Kilograms) of Pre-emergent Granular Herbicide applied. Areas treated after mulch placement shall not be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price per pound (kilogram) of WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE.

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:

701101-05 Off-Road Operations, Multilane, 15' to 24" From Edge of Pavement
701427-05 Lane Closure, Multilane, Intermittent or Moving Oper., for Speeds <- 40 mph
701601-09 Urban Lane Closure, Multilane, 1W or 2W with Nontraversable Median
701602-10 Urban Lane Closure, Multilane, 2W with Bidirectional Left Turn Lane
701606-10 Urban Single Lane Closure, Multilane, 2W with Mountable Median
701701-10 Urban Lane Closure, Multilane Intersection
701801-06 Sidewalk, Corner, or Crosswalk Closure
701901-11 Traffic Control Devices

DETAILS:

Traffic Control and Protection for Side Roads, Intersections & Driveways (TC-10)
District One Typical Pavement Markings (TC-13)
Traffic Control and Protection at Turn Bays (To Remain Open to Traffic) (TC-14)
Short Term Pavement Marking Letters and Symbols (TC-16)
Arterial Road Information Sign (TC-22)
Driveway Entrance Signing (TC-26)

SPECIAL PROVISIONS:

"Public Convenience and Safety (D1)"
"Maintenance of Roadways (D1)"
"Temporary Information Signing"
"Traffic Control and Protection (Arterials) (D1)"
"Raised Reflective Pavement Marker, Reflector Removal"
"Raised Reflective Pavement Marker, Reflector Replacement"
"Keeping Arterial Roadways Open to Traffic (Lane Closures Only)"
"Pavement Marking (BDE)"
"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.

TRAFFIC SIGNAL GENERAL REQUIREMENTS

Effective: May 22, 2002

Revised: April 1, 2026

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) Warrantees and Guarantees. All manufacturer and Contractor warrantees 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 Contactor 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 unless specific equipment is requested to be kept or sent to IDOT Spare Parts by the Engineer. Any equipment not kept by the Department shall be 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, Spare Parts delivery, 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:

NEW
TRAFFIC
SIGNAL

STARTING
MMM ##

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:

NEW
SIGNAL
AHEAD

BE
PREPARED
TO STOP

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.”

ROD AND CLEAN EXISTING CONDUIT

Effective: January 1, 2015

Revised: July 1, 2015

810.03TS

Description.

This work shall consist of inserting a duct rod or electrical fish rod or tape of sufficient length and rigidity into an electrical conduit opening in one electrical handhole, and pushing the said rod through the conduit to emerge at the next or subsequent handhole in the conduit system at the location(s) shown on the plans. The duct rod may be inserted and removed by any standard construction method which causes no damage to the conduit. The size of the conduit may vary, but there shall be no differentiation in cost for the size of the conduit.

The conduit which is to be rodded and cleaned may exist with various amounts of standing water in the handholes to drain the conduit and to afford compatible working conditions for the installation of the duct rods and/or cables. Pumping of handholes shall be included with the work of rodding and cleaning of the conduit.

Any handhole which, in the opinion of the Engineer contains excessive debris, dirt or other materials to the extent that conduit rodding and cleaning is not feasible, shall be cleaned at the Engineer's order and payment approval as a separate pay item.

Prior to removal of the duct rod, a duct cleaning attachment such as a properly sized wire brush or cleaning mandrel shall be attached to the duct rod, which by removal of the duct rod shall be pulled through the conduit to remove sand, grit, or other light obstructions from the duct to provide a clean, clear passage for the installation of cable. Whenever the installation of cables is not performed as an adjunct to or immediately following the cleaning of the duct, a light weight pulling line such as a 1/8" polyethylene line or conduit measuring tape shall be placed and shall remain in the conduit to facilitate future work. When great difficulty of either inserting the duct rod or removal of the cleaning mandrel is encountered, the duct may require further cleaning by use of a compressed air gun, or a low pressure water hose. In the case of a broken conduit, the conduit must be excavated and repaired. The existence and location of breaks in the conduit may be determined by rodding, but the excavation and repair work required will be paid for separately.

This work shall be measured per lineal foot for each conduit cleaned. Measurements shall be made from point to point horizontally. No vertical rises shall count in the measurement.

Basis of Payment.

This work shall be paid for at the contract unit price per lineal foot for ROD AND CLEAN EXISTING CONDUIT for the installation of new electric cables in existing conduits. Such price shall include the furnishing of all necessary tools, equipment, and materials required to prepare a conduit for the installation of cable.

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.

FIBER OPTIC TRACER CABLE

Effective: May 22, 2002

Revised: November 1, 2023

817.02TS

The cable shall meet the requirements of Section 817 of the Standard Specifications, except for the following:

Add the following to Article 817.03 of the Standard Specifications:

“In order to trace the fiber optic cable after installation, the tracer cable shall be installed in the same conduit as the fiber optic cable in locations shown on the plans. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable will be allowed to be spliced at handholes only. The tracer cable splice shall use a Western Union Splice soldered with resin core flux and shall be soldered using a soldering iron. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. All exposed surfaces of the solder shall be smooth. The splice shall be covered with a black shrink tube meeting UL 224 guidelines, Type V and rated 600V, minimum length 4 in. (100 mm) and with a minimum 1 in. (25 mm) coverage over the XLP insulation, underwater grade.”

Revise Article 817.05 of the Standard Specifications to read:

“Basis of Payment. The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per foot (meter), which price shall include all associated labor and material for installation.”

FULL-ACTUATED CONTROLLER AND CABINET

Effective: January 1, 2002

Revised: April 1, 2026

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) "Econolite" 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:

(a) (1) Optionally, a "Type 4.5/Type IV Stretched" cabinet shall be provided. This cabinet has the same dimensions as a Type IV cabinet with an additional height. Additionally, it shall include a front and rear door with double, vented overhangs for protection from water intrusion.

(a) (2) a. The gaskets shall be permanently bonded to the cabinet. The gaskets shall include a polyester film to prevent the gaskets from sticking to the cabinet surface.

(a) (2) e. A rain channel shall be incorporated into the design of the main door opening to prevent liquids from entering the enclosure. The cabinet door opening shall be a minimum of 80 percent of the front surface of the cabinet. A stiffener plate shall be welded across the inside of the main door to prevent flexing.

(a) (2) f. The top of the cabinet shall incorporate a 1 in. slope towards the rear to prevent rain accumulation.

(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) 800 W, thermostatically controlled, electric heater with automatic fan function.

(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.
- (b) (21) Insulation - minimum half inch polystyrene rigid board insulation with a minimum R-3 thermal resistance attached to the top of cabinet on the interior side.

Installation.

Add the following to the second paragraph of Article 857.03 of the Standard Specifications:

“All existing multiconductor cable to be reinstalled shall be cut back to expose individual conductors beneath the outer jacket. Individual conductors shall be stripped and trained as necessary for a complete professional and efficient installation.”

Basis of Payment.

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

FIBER OPTIC CABLE

Effective: May 22, 2002

Revised: July 1, 2015

871.01TS

Add the following to Article 871.01 of the Standard Specifications:

The Fiber Optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 871.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be 24 Port Fiber Wall Enclosure, unless otherwise indicated on plans. The fiber optic cable shall provide twelve fibers per tube for the amount of fibers called for in the Fiber Optic Cable pay item in the Contract. Fiber Optic cable may be gel filled or have an approved water blocking tape.

Add the following to Article 871.04 of the Standard Specifications:

A minimum of six multimode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled "spare." Fibers not attached to the distribution enclosure shall be capped.. A minimum of 13.0 feet (4m) of extra cable length shall be provided for controller cabinets. The controller cabinet extra cable length shall be stored as directed by the Engineer.

Add the following to Article 871.06 of the Standard Specifications:

The distribution enclosure and all connectors will be included in the cost of the fiber optic cable.

Testing shall be in accordance with Article 801.13(d). Electronic files of OTDR signature traces shall be provided in the Final project documentation with certification from the Contractor that attenuation of each fiber does not exceed 3.5 dB/km nominal at 850nm for multimode fiber and 0.4 bd/km nominal at 1300nm for single mode fiber.

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.

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.

LED SIGNAL FACE, LENS COVER

Effective: July 1, 2021

Revised: March 1, 2025

880.03TS

Description.

This work shall consist of furnishing and installing a signal lens cover with the purpose or preventing snow buildup on and around a signal lens allowing for clear indication during inclement weather.

This item shall fit over a 12 in. signal head lens and shall include the clear lens cover, attachment collar, and any clips or fasteners necessary to fit it flush. The cover must be installed in accordance with the Manufacturer's instructions and in a manner that prevents dust, debris, or moisture buildup on the inside of the lens cover that could affect the signal indication visibility. All mounting hardware including screws used for lens cover installation must be stainless steel. Lens covers shall be installed on all red signal head indications.

The snow resistant signal head lens cover must be warrantied for a period of three (3) years from final inspection and must be free from material and workmanship defects.

Basis of Payment.

This work shall be paid for at the Contract unit price each for LED SIGNAL FACE, LENS COVER, the price of which shall include the cost for all work and material described herein and includes furnishing, installing, and all mounting hardware necessary for a fully operational snow resistant signal head lens cover.

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, 2026

882.01TS

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

"The traffic signal backplate shall be made of composite laminated aluminum or ABS plastic (vacuum formed). The composite laminated aluminum shall have a nominal thickness of 0.080 in. (2.0 mm) with a nominal 0.01 in. (0.3 mm) aluminum skin on both sheet sides and shall have a minimum tensile strength of 4,300 psi at 73 °F (30,000 kPa at 23 °C). The vacuum formed ABS

plastic backplate shall have a nominal thickness of 1/8 in. (3 mm), a nominal 1/2 in. (13 mm) deep back flange on all inside and outside edges, and a minimum tensile strength of 4,300 psi at 73 °F (30,000 kPa at 23 °C)."

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 third paragraph of Article 1078.03 of the Standard Specifications.

Revise the fourth paragraph of Article 1078.03 of the Standard Specifications to read:

"The traffic signal backplate shall be louvered to provide openings (louvers) to allow wind to penetrate and reduce wind loading.

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.

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.

ACCESSIBLE PEDESTRIAN SIGNALS

Effective: April 1, 2003

Revised: April 1, 2026

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.

In addition, a speech push-button information message must be provided by the APS push-button during the Don't Walk interval by pressing and holding the push-button for 1 second. This verbal message must be modeled after: "Wait to cross [Street Name] at [Street Name]".

If multiple accessible pedestrian push-buttons are placed less than 10 ft apart or placed on the same pole, the audible walk indications must be a speech message. This speech message must sound throughout the Walk interval only. Where multiple 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.

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.

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 "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.

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.

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.

Crossing of the right turn lane to or from corner island:

“Wait to cross [Street Name] right turn lane at [Street Name]” and
“[Street Name] right turn lane. Walk sign is on to cross [Street Name] right turn lane”.

Crossing to refuge island or center median where second push-button actuation is required:

“Wait to cross [Street Name] at [Street Name] to [island/median] with additional push-button” and
“[Street Name]. Walk sign is on to cross [Street Name] to [island/median] with additional push-button”.

The appropriate wording shall be used depending if the destination is a corner island or center median.

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, is not 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

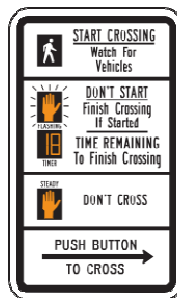
minimum warranty of five (5) years.

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.

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

LED INTERNALLY ILLUMINATED STREET NAME SIGN

Effective: May 22, 2002

Revised: July 1, 2021

891.02TS

Description.

This work shall consist of furnishing and installing a LED internally illuminated street name sign.

Materials.

The illuminated street name sign shall be as follows.

(a) Description.

The LEDs shall be white in color. The LED internally illuminated street name sign shall display the designated street name clearly and legibly in the daylight hours without being energized and at night when energized. White translucent Type ZZ reflective sheeting sign faces with the street name applied in transparent green shall be installed on the street sign acrylic panels which shall be affixed to the interior of the sign enclosure. Sheeting material shall be of one continuous piece. Paneling shall not be allowed. Hinged door(s) shall be provided for easy access to perform general cleaning and maintenance operations. Illumination shall occur with LED Light Engine as specified.

(b) Environmental Requirements.

The LED lamp shall be rated for use in the ambient operating temperature range of -40 to +50°C (-40 to +122°F) for storage in the ambient temperature range of -40 to +75°C (-40 to +167°F).

(c) General Construction.

1. The LED components, power supply, and wiring harness shall be arranged as to allow for maintenance, up to and including the replacement of all three components. The LED Light Engine shall be mounted in the top and/or bottom of the sign housing and no components of the light source shall sit between the sign faces.
2. The assembly and manufacturing processes of the LED Light Engine shall be designed to ensure that all LED and electronic components are adequately supported to withstand mechanical shocks and vibrations in compliance with the specifications of the ANSI C136.31-2001 standards.

(d) Mechanical Construction.

1. The sign shall be constructed using a weatherproof, aluminum housing consisting of an extruded aluminum with the maximum sign dimensions of 30" in height, 96" in length,

10.75" in depth (including the drip edge) and shall not weight more than 110 pounds. All housing corners are continuous TIG (Tungsten Inert Gas) welded to provide a weatherproof seal.

2. The sign doors shall be continuous TIG welded along the two corners with the other two screwed together to make one side of the door removable for installation of the sign face. The door is fastened to the housing on the bottom by a full length stainless steel hinge. The sign shall also be fabricated in a way to ensure that no components fall out while a technician is opening or working inside the sign enclosure. The door shall be held secure onto a 1" wide by 5/32" thick neoprene gasket by an appropriate number of quarter-turn fasteners to form a watertight seal between the door and the housing.
 3. The sign face shall be constructed of .125" white translucent polycarbonate or acrylic. Sign legend shall be according to D1 Mast Arm Mounted Street Name Sign detail and MUTCD. The sign face legend background shall consist of translucent Type ZZ white reflective sheeting and transparent green film applied to the front of the sign face. The legend shall be framed by a white border. A logo symbol and/or name of the community may be included with approval of the Engineer.
 4. All fasteners and hardware shall be corrosion resistant stainless steel. No special tools shall be required for routine maintenance.
 5. All wiring shall be secured by insulated wire compression nuts or barrier type terminal blocks.
 6. A wire entrance junction box shall be supplied with the sign assembly. The box may be supplied mounted to the exterior or interior of the sign and shall provide a weather tight seal.
 7. A photoelectric switch shall be mounted inside control cabinet to control lighting functions for day and night display. Each sign shall be individually fused.
 8. Brackets and Mounting: LED internally illuminated street name signs will be factory drilled to accommodate mast arm two-point support assembly mounting brackets unless indicated otherwise in the plans. A 72" stainless steel safety cable shall be included and installed with each mounting bracket.
- (e) Electrical.
1. Photocell shall be rated 105-305V, turn on at 1.5 fcs. with a 3-5 second delay. A manufacturer's warranty of six (6) years shall be provided. Power consumption shall be no greater than 1 watt at 120V.
 2. The LED Light Engine shall operate from a 60 +/- 3 cycle AC line power over a voltage range of 80 to 135 Vac rms. Fluctuations in line voltage over the range of 80 to 135 Vac shall not affect luminous intensity by more than +/- 10%.

3. Total harmonic distortion induced into the AC power line by the LED Light Engine, operated at a nominal operating voltage and at a temperature of +25°C (+77°F), shall not exceed 20%.
 4. The LED Light Engine shall cycled ON and OFF with a photocell as shown on the detail sheet and shall not exceed 120 Watts. The signs shall be installed such that they are not energized when traffic signals are powered by an alternate energy source such as a generator or uninterruptable power supply (UPS).
- (f) Photometric Requirements.
1. The entire surface of the sign panel shall be evenly illuminated. The average maintained luminous intensity measured across the letters, operating under the conditions defined in Environmental Requirements and Wattage Sections shall be of a minimum value of 100 cd/m².
 2. The manufacturer shall make available independent laboratory test results to verify compliance to Voltage Range and Luminous Intensity Distribution Sections.
 3. LED shall have a color temperature of 5200k nominal, CRI of 80 with a life expectancy of 75,000 hrs.
- (g) Quality Assurance.
- The LED Light Engine shall be manufactured in accordance with a vendor quality assurance (QA) program. The production QA shall include statistically controlled routine tests to ensure minimum performance levels of the LED Light Engine build to meet this specification. QA process and test result documentations shall be kept on file for a minimum period of seven (7) years. The LED Light Engine that does not satisfy the production QA testing performance requirements shall not be labeled, advertised, or sold as conforming to these specifications. Each LED Light Engine shall be identified by a manufacturer's serial number for warranty purposes. LED Light Engines shall be replaced or repaired if they fail to function as intended due to workmanship or material defects within the first sixty (60) months from the date of acceptance. LED Light Engines that exhibit luminous intensities less than the minimum value specified in Photometric Section within the first thirty-six (36) months from the date of acceptance shall be replaced or repaired.

Installation.

The sign shall be located on a steel traffic signal mast arm no further than 8-feet from the center of the pole to the center of the sign at a height of between 16 to 18-feet above traveled pavement. Mounting hardware shall be from an approved vendor, utilizing stainless steel components.

Basis of Payment.

This work will be paid for at the contract unit price each for LED INTERNALLY ILLUMINATED STREET NAME SIGN, of the length as specified in the contract plans which shall be payment in full for furnishing and installing the LED internally illuminated street name sign, complete with circuitry and mounting hardware including photo cell, circuit breaker, fusing, relay, connections and cabling as shown on the plans for proper operation and installation.

The Illuminated street name sign cable will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW, which price shall be payment in full for furnishing, installing and making all electrical connections necessary for proper operations.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Effective: May 22, 2002

Revised: April 1, 2026

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 unless specific equipment is requested to be kept or sent to IDOT Spare Parts by the Engineer. Any equipment not kept by the Department 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.”

TRAFFIC SIGNAL POST (SPECIAL)

Description. This work shall consist of furnishing and installing an aluminum traffic signal post with a cast aluminum fluted base. The traffic signal post and base shall meet the requirements of the current District One Traffic Signal Special Provisions in addition to the following requirements:

Manufacturer: Sternberg Lighting (7700 Series)
Color: Verde Green
Base Plate: Birmingham
Pole: Straight Flute
Post Center Cap: BCC
Straps: Verde Green to Match Poles

All traffic signal posts, associated ornamental bases and any exposed steel hardware shall be assembled and powder coated verde green by the supplier/manufacturer. The powder coat finish shall meet the requirements of STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL).

Pedestrian pushbutton stations shall be mounted to ornamental signal posts according to the following: The top and bottom of the station shall be secured by drilling, tapping, and installing a 3/8-inch stainless steel threaded bolt, lock washer, and hex nut. Do not use self- tapping screws. The pushbutton station shall be plumb. Spacers made of 3/4-inch aluminum conduit shall be installed behind the station.

All ornamental bases shall fit tightly around the poles, with little or no gap at the top of the ornamental base. Two-piece ornamental bases shall fit together tightly with little or no gap between the two pieces. All bases shall fit securely on top of the foundation and shall not easily move or wobble.

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.

Basis of Payment. This work shall be paid for at the contract unit price each for TRAFFIC SIGNAL POST, of the length specified on the plans, (SPECIAL).

STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL)

Description. This work shall consist of furnishing and installing a steel combination mast arm assembly and pole with a cast aluminum, decorative two-piece split base that clamps around the pole and base plate. The mast arm assembly and pole and base shall meet the requirements of

the current District One Traffic Signal Special Provisions in addition to the following requirements:

Manufacturer: Sternberg Lighting (7200 Series)

Part Numbers:

42' mast arm assembly and pole: 2A90-TA15/MA42/7240SRTF-16SF-BCC5/VG

46' mast arm assembly and pole: 2A90-TA15/MA46/7240SRTF-16SF-BCC5/VG

55' mast arm assembly and pole: 2A90-TA15/MA55/7240SRTF-16SF-BCC5/VG

60' mast arm assembly and pole: 2A90-TA15/MA60/7240STRF-16SF-BCC5/VG

Color: Verde Green. Base: 7201 Birmingham Split Pole: Round Tapered Flute

Traffic Signal Mast Arm: "CA" style, upswept, smooth tapered steel mast arm

Luminaire Mast Arm: "TA" style, 15-foot

Post Center Cap: BCC5

Straps: Verde Green to Match Poles

All mast arms, mast arm poles, luminaire arms and any exposed steel hardware shall be hot-dipped galvanized and powder-coated verde green by the supplier/manufacturer as described below. Cast aluminum bases shall also be powder-coated verde green by the supplier/manufacturer as described below.

All galvanized and aluminum exterior surfaces shall be coated with chip resistive epoxy resin primer applied via electrostatic spray equipment. The primer is to be applied at a minimum dry film thickness (DFT) of 3.0 mils with a minimum DFT of 6.0 mils applied to the lower 8 feet of the pole. The primer must be energy absorptive and capable of achieving a rating of 10A under testing per ASTM (American Society for Testing and Materials) Procedure D3170, Standard Test Method for Chipping Resistance of Coatings.

The primed surfaces shall then be coated with a verde green TGIC Super Durable Polyester topcoat to a minimum dry film thickness of 3.0 mils. The topcoat must meet the requirements of AAMA (American Architectural Manufacturer's Association) 2604 for color and gloss retention properties.

Stainless steel mesh screening shall be stainless steel banded to the anchor bolts, with a minimum 2-inch lap, to enclose the void between the top of the foundation and the base plate. The mesh screening shall have 1/4-inch maximum opening and a minimum wire diameter of AWG No. 16.

All ornamental bases shall fit tightly around the poles, with little or no gap at the top of the ornamental base. Two-piece ornamental bases shall fit together tightly, with little or no gap between the two pieces. All bases shall fit securely on top of the foundation, and shall not easily move or wobble. All ornamental bases shall have an access hand hole with a removable cover and a minimum opening size of 200 square inches.

Pedestrian pushbutton stations shall be mounted to ornamental mast arm bases according to the following: The top and bottom of the station shall be secured by drilling, tapping, and installing a 3/8-inch stainless steel threaded bolt, lock washer, and hex nut. Do not use self-tapping screws. The pushbutton station shall be plumb. Spacers made of 3/4-inch aluminum conduit shall be installed behind the station.

Basis of Payment. This work shall be paid for at the contract unit price each for STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, of the mast arm length(s) specified on the plans, (SPECIAL).

REMOVE EXISTING DOUBLE HANDHOLE

Description. This work shall consist of removing double handholes as shown in the plans or as directed by the Engineer. All work shall be in accordance with the applicable parts of Section 895 of the Standard Specifications.

Construction Requirements. Work shall be according to Article 895.05(b) for removal of an existing handhole.

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

RELOCATE EXISTING MASTER CONTROLLER

General.

This work shall consist of removing and re-installing an existing master controller in a new traffic signal cabinet, meeting the requirements of the current District One Traffic Signal Special Provision 857.02TS FULL-ACTUATED CONTROLLER AND CABINET, including all necessary connections for proper operation.

Materials and Installation.

Revise Articles 860.02 and 860.03 of the Standard Specifications to read:

Functional requirements in addition to those in Section 863 of the Standard Specifications include:

The system commands shall consist of, as a minimum, six (6) cycle lengths, five (5) offsets, three (3) splits, and four (4) special functions. The system commands shall also include commands for free or coordinated operation.

Traffic Responsive operation shall consist of the real time acquisition of system detector data, data validation, and the scaling of acquired volumes and occupancies in a deterministic fashion so as to cause the selection and implementation of the most suitable traffic plan.

Upon request by the Engineer, up to three (3) complete sets of the latest edition of registered remote monitoring software with full manufacture's support shall be delivered. Each set shall consist of software on USB, or other suitable media approved by the Engineer, and a bound set of manuals containing loading and operating instruction. One copy of the software and support data shall be delivered to the Agency in charge of system operation, if other than IDOT. One of these two sets will be provided to the Agency Signal Maintenance Contractor for use in monitoring the system.

The Contractor shall arrange to install a cellular modem to the master controller. This shall be accomplished following the requirements contained in the current District One Traffic Signal Special Provision 892.01TS CELLULAR MODEM, as well as through the following process utilizing District One staff. An E911 address is required.

Full duplex communication between the master and its local controllers is recommended, but at this time not required. The data rate shall be 1200 baud minimum and shall be capable of speeds to 38,400 or above as technology allows. The controller, when installed in an Ethernet topology, may operate non-serial communications.

As soon as practical or within one week after the contract has been awarded, the Contractor shall contact the Traffic Signal Systems Engineer to request a SIM card. The SIM card will be provided by the Department. The Contractor shall provide the cellular modem model and International Mobile Equipment Identity (IMEI) value to the Department to complete the SIM card request.

The cellular modem shall be installed and activated one month before the system final inspection.

All costs associated with the cellular modem activation (not including installation) shall be paid for by the District One Business Services Section (i.e., this will be an IDOT phone number, not a Contractor phone number)."

Basis of Payment.

This work will be paid for at the contract unit price each for RELOCATE EXISTING MASTER CONTROLLER.

COMBINATION LIGHTING CONTROLLER

Effective: February 1, 2015

Revised: May 5, 2022

Description

This item shall consist of furnishing and installing a combination lighting controller complete with the panel assembly indicated on the drawings and wiring for the control of highway lighting as specified herein, shown on the Contract Drawings and as directed by the Engineer.

Materials

Photo control. The photocell shall be in accordance with Article 1068.01(e)(2) except that the size of the photocell shall allow mounting under the cabinet roof overhang.

Overcurrent Protection. Circuit breakers shall be 30A unless otherwise indicated. Circuit breakers shall be standard listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 V circuit breakers shall have a listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated circuit voltage for which the breaker is applied.

Contactor. The contactor shall be a 30A, 2-Pole, 120VAC@60Hz electrically held contactor.

Hand-Off-Auto switch. 30mm. 3 position selector switch.

Panel Assembly. Threaded brass inserts shall be provided for the non-conductive inner mounting panel.

CONSTRUCTION REQUIREMENTS

General

This item shall be constructed in full accord with Section 825 of the Standard Specifications and the details as indicated in the Contract Drawings.

Basis of Payment

This work shall be paid for at the contract unit price each for **COMBINATION LIGHTING CONTROLLER** which price shall be payment in full for furnishing, installing, shipping, handling, tools and appurtenances necessary for a complete and operational unit as indicated on the drawings and as approved by the Engineer

GENERAL ELECTRICAL REQUIREMENTS

This special provision replaces Articles 801.01 – 801.07, 801.09 – 801-16 of the Standard Specifications.

Definition. Codes, standards, and industry specifications cited for electrical work shall be by definition the latest adopted version thereof, unless indicated otherwise.

Materials shall include electrical equipment, fittings, devices, motors, appliances, fixtures, apparatus, all hardware and appurtenances, and the like, used as part of, or in connection with, electrical installation.

Standards of Installation. Materials shall be installed according to the manufacturer's recommendations, the NEC, OSHA, the NESC, and AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

All like materials shall be from the same manufacturer. Listed and labeled materials shall be used whenever possible. The listing shall be according to UL or an approved equivalent.

Safety and Protection. Safety and protection requirements shall be as follows.

Safety. Electrical systems shall not be left in an exposed or otherwise hazardous condition. All electrical boxes, cabinets, pole handholes, etc. which contain wiring, either energized or non-energized, shall be closed or shall have covers in place and be locked when possible, during nonworking hours.

Protection. Electrical raceway or duct openings shall be capped or otherwise sealed from the entrance of water and dirt. Wiring shall be protected from mechanical injury.

Equipment Grounding Conductor. All electrical systems, materials, and appurtenances shall be grounded. Good ground continuity throughout the electrical system shall be assured, even though every detail of the requirements is not specified or shown. Electrical circuits shall have a continuous insulated equipment grounding conductor. When metallic conduit is used, it shall be bonded to the equipment grounding conductor, but shall not be used as the equipment grounding conductor.

Detector loop lead-in circuits, circuits under 50 volts, and runs of fiber optic cable will not require an equipment grounding conductor.

Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point. After the connection is completed, the paint system shall be repaired to the satisfaction of the Engineer.

Bonding of all boxes and other metallic enclosures throughout the wiring system to the equipment grounding conductor shall be made using a splice and pigtail connection. Mechanical connectors shall have a serrated washer at the contact surface.

All connections to structural steel or fencing shall be made with exothermic welds. Care shall be taken not to weaken load carrying members. Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate a mechanical connection. The epoxy coating shall be repaired to the satisfaction of the Engineer. Where connections are made to insulated conductors, the connection shall be wrapped with at least four layers of electrical tape extended 6 in. (150 mm) onto the conductor insulation.

Submittals. At the preconstruction meeting, the Contractor shall submit a written listing of manufacturers for all major electrical and mechanical items. The list of manufacturers shall be binding, except by written request from the Contractor and approval by the Engineer. The request shall include acceptable reasons and documentation for the change.

Within 30 calendar days after contract execution, the Contractor shall submit, for approval, through the method as directed in the pre-construction meeting. Submittals for the materials for each individual pay item shall be complete in every respect. Submittals which include multiple pay items shall have all submittal material for each item or group of items covered by a particular specification, grouped together and the applicable pay item identified. Various submittals shall, when taken together, form a complete coordinated package. A partial submittal will be returned without review unless prior written permission is obtained from the Engineer.

Submittals shall be provided for all items used, temporary and permanent, for review and approval.

Equipment which will be owned and maintained by a local agency other than the State shall be reviewed and approved by that agency prior to submittal to the State. The submittal to the State shall include any comments made by the local agency.

Each PDF document must be a vector format PDF from the originating supplier or program and not scanned images.

The submittal must clearly identify the specific model number or catalog number of the item being proposed. Submittals must be the Manufacturers current published information. Out of date submittal material will be grounds for rejection.

The submittal shall be properly identified by Contractor, Pay Item Number, route, section, county, and contract number. Example:

Contractor: Contractor Name Pay Item: X0327607 Route: I-00 Section: 2013-xxx-yzx County: Cook Contract: 12Z34
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The Contractor shall have reviewed the submittal material and affixed the Contractor's stamp of approval, with date and signature, for each individual item prior to submittal. The Contractor's approval stamp shall be the first page of the submittal.

Illegible print, incompleteness, inaccuracy, or lack of coordination will be grounds for rejection.

Items from multiple disciplines shall not be combined on a single submittal and transmittal. Items for lighting, signals, surveillance, and CCTV must be in separate submittals since they may be reviewed by various personnel in various locations.

The Village may provide a list of pay items broken out by discipline upon request for a particular contract. In general, the disciplines are as follows:

Discipline	Typical Items
ITS	CCTV CCTV structures Communication vaults Fiber optic Fiber optic duct Network equipment
Lighting	Breakaway devices Light poles Light tower Lighting cables Lighting controllers Luminaires Unit duct
Pump Station	All pump station equipment
Signing	Signing
Surveillance	Loop cables Detector equipment & associated structures Ramp metering & associated structures Wireless pavement sensors and assoc. structures Radar detection Data Probing Handholes Dynamic Message Signs (DMS)
Traffic Signal	Controllers/Cabinets Handholes Illuminated signs Pedestrian Push Buttons Signal Cable Signal Detectors Signal Heads Signal Loop Cable Signal Modules Signal Structures
Local Roads Lighting	Same as lighting
Local Roads Traffic Signal	Same as traffic signal
Discipline with the predominate amount of work in contract or ask Engineer.	Raceways Electric cables Junction boxes

The Engineer will review the submittals for conformance with the design concept of the project according to Article 105.04 and the following. The Engineer will stamp the drawings indicating their status as "Approved", "Approved as Noted", "Disapproved", "Incomplete", or "Information Only". Since the Engineer's review is for conformance with the design concept only, it shall be 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, or layout drawings by the Engineer's approval thereof. The Contractor shall still be in full compliance with contract and specification requirements.

All submitted items reviewed and marked "Disapproved", "Incomplete" or "Approved as Noted" shall be resubmitted by the Contractor in their entirety, unless otherwise indicated within the submittal comments.

Work shall not begin until the Engineer has approved the submittal. Material installed prior to approval by the Engineer, will be subject to removal and replacement at no additional cost to the Village.

Certifications. When certifications are specified and are available prior to material manufacture, the certification shall be included in the submittal information. When specified and only available after manufacture, the submittal shall include a statement of intent to furnish certification. All certificates shall be complete with all appropriate test dates and data.

Authorized Project Delay. See Article 801.08

Maintenance transfer and Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any electrical systems (lighting, ITS, Pump Station, Surveillance, and traffic control systems) which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than fourteen (14) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction period.

Establish the approximate location and operating condition of the electrical systems which may be affected by the work.

Marking of Existing Cable Systems. The party responsible for maintenance of any existing electrical systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the Village. A project may involve multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 1 foot (304.8 mm) to either side. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The

Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. Note that the contractor shall be entitled to only one request for location marking of existing systems and that multiple requests may only be honored at the contractor's expense. No locates will be made after maintenance is transferred unless it is at the contractor's expense.

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken. The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record, all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition."

Maintenance and Responsibility During Construction.

Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance of the existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein. Maintenance of lighting systems is specified elsewhere and will be paid for separately.

The proposed lighting system must be operational prior to opening the roadway to traffic unless temporary lighting exists which is designed and installed to properly illuminate the roadway.

Electrical Infrastructure During Construction. The scope of work shall include locating and marking the proposed underground infrastructure installed in this contract.

Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in service, whether the system has passed final acceptance or not, (such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.

Damage to Electrical Systems. Should damage occur to any existing electrical systems through the Contractor's operations, the Engineer will designate the repairs as emergency or non-emergency in nature.

Emergency repairs shall be made by the Contractor, or as determined by the Engineer, the Village, or its agent. Non-emergency repairs shall be performed by the Contractor within six working days following discovery or notification. All repairs shall be performed in an expeditious manner to assure all electrical systems are operational as soon as possible. The repairs shall be performed at no additional cost to the Village.

Lighting. An outage will be considered an emergency when three or more lights on a circuit or three successive lights are not operational. Knocked down materials, which result in a danger to the motoring public, will be considered an emergency repair.

Temporary aerial multi-conductor cable, with grounded messenger cable, will be permitted if it does not interfere with traffic or other operations, and if the Engineer determines it does not require unacceptable modification to existing installations.

Marking Proposed Locations. The Contractor shall mark or stake the proposed locations of all poles, cabinets, junction boxes, pull boxes, handholes, cable routes, pavement crossings, and other items pertinent to the work. A proposed location inspection by the Engineer shall be requested prior to any excavation, construction, or installation work after all proposed installation locations are marked. Any work installed without location approval is subject to corrective action at no additional cost to the Village.

Inspection of electrical work. Inspection of electrical work shall be according to Article 105.12 and the following.

Before any splice, tap, or electrical connection is covered in handholes, junction boxes, light poles, or other enclosures, the Contractor shall notify and make available such wiring for the Engineer's inspection.

Testing.

General. Before final inspection, the electrical work shall be tested. Tests may be made progressively as parts of the work are completed or may be made when the work is complete. Tests shall be made in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced. Tests shall include checks of control operation, system voltages, cable insulation, and ground resistance and continuity.

The forms for recording test readings will be available from the Engineer in electronic format. The Contractor shall provide the Engineer with a written report of all test data including the following:

- Voltage Tests
- Amperage Tests
- Insulation Resistance Tests
- Continuity tests
- Resistance of Grounding Electrodes

Lighting systems. The following tests shall be made.

- (1) Voltage Measurements. Voltages in the cabinet from phase to phase and phase to neutral, at no load and at full load, shall be measured and recorded. Voltage readings at the last termination of each circuit shall be measured and recorded.
- (2) Insulation Resistance. Insulation resistance to ground of each circuit at the cabinet shall be measured and recorded with all loads disconnected. Prior to performance of the insulation resistance test, the Contractor shall remove all fuses within all light pole bases on a circuit to segregate the luminaire loads.

On tests of new cable runs, the readings shall exceed 50 megohms for phase and neutral conductors with a connected load over 20A and shall exceed 100 megohms for conductors with a connected load of 20A or less.

On tests of cable runs which include cables which were existing in service prior to this contract, the resistance readings shall be the same or better than the readings recorded at the maintenance transfer at the beginning of the contract. Measurements shall be taken with a megohm meter approved by the Engineer.

- (3) Loads. The current of each circuit, phase main, and neutral shall be measured and recorded. The Engineer may direct reasonable circuit rearrangement. The current readings shall be within ten percent of the connected load based on material ratings.
- (4) Ground Continuity. Resistance of the system ground as taken from the farthest extension of each circuit run from the controller (i.e. check of equipment ground continuity for each circuit) shall be measured and recorded. Readings shall not exceed 2.0 ohms, regardless of the length of the circuit.
- (5) Resistance of Grounding Electrodes. Resistance to ground of all grounding electrodes shall be measured and recorded. Measurements shall be made with a ground tester during dry soil conditions as approved by the Engineer. Resistance to ground shall not exceed 10 ohms.

All test results shall be furnished to the Engineer seven working days before the date the inspection is scheduled.

Contract Guarantee. The Contractor shall provide a written guarantee for all electrical work provided under the contract for a period of six months after the date of acceptance with the following warranties and guarantees.

- (a) The manufacturer's standard written warranty for each piece of electrical material or apparatus furnished under the contract. The warranty for light emitting diode (LED) modules, including the maintained minimum luminance, shall cover a minimum of 120 months from the date of delivery.
- (b) The Contractor's written guarantee that, for a period of six months after the date of final acceptance of the work, all necessary repairs to or replacement of said warranted

material or apparatus for reasons not proven to have been caused by negligence on the part of the user or acts of a third party shall be made by the Contractor at no additional cost to the Village.

- (c) The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of six months after final acceptance of the work.

Record Drawings. Alterations and additions to the electrical installation made during the execution of the work shall be made on the PDF copy of the as-Let documents using a PDF editor. Hand drawn notations or markups and scanned plans are not acceptable. These drawings shall be updated daily and shall be available for inspection by the Engineer during the work. The record drawings shall include the following:

- Cover Sheet
- Summary of Quantities, electrical items only
- Legends, Schedules, and Notes
- Plan Sheets
- Final fiber assignment tables
- Pertinent Details
- Single Line Diagrams; electrical, communications, surveillance and fiber optic.
- Other useful information useful to locate and maintain the systems.

Any modifications to the details shall be indicated. Final quantities used shall be indicated on the Summary of Quantities. **Foundation depths used shall also be listed.**

As part of the record drawings, the Contractor shall inventory all materials, new or existing, on the project and record information on inventory sheets provided by the Engineer.

The inventory shall include:

- Location of Equipment, including rack, chassis, slot as applicable.
- Designation of Equipment
- Equipment manufacturer
- Equipment model number
- Equipment Version Number
- Equipment Configuration
 - Addressing, IP or other
 - Settings, hardware or programming
- Equipment Serial Number

The following electronic inventory forms are available from the Engineer:

- Lighting Controller Inventory
- Lighting Inventory
- Light Tower Inspection Checklist
- ITS Location Inventory

The information shall be entered in the forms; handwritten entries will not be acceptable; except for signatures. Electronic file shall also be included in the documentation.

When the work is complete, and seven days before the request for a final inspection, the set of contract drawings, marked "**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 via a mutually agreed to electronic format for review and approval.

In addition to the record drawings, PDF copies of the final catalog cuts which have been Approved and Approved as Noted with applicable follow-up shall be submitted along with the record drawings. **The PDF files shall clearly indicate either by filename or PDF table of contents (bookmarks) the respective pay item number.** Specific part or model numbers of items which have been selected shall be clearly visible.

If the Electric Service is new or modified, documentation as required in the Electric Utility Service Connection shall be submitted.

During the Final Inspection, the Contractor shall provide three sets of electronically produced drawings in a moisture proof pouch to be kept on the inside door of the controller cabinet or other location approved by the Engineer. These drawings shall show the final as-built circuit orientation(s) of the project in the form of a single line diagram with all equipment designations and clearly identified.

Final documentation shall be submitted as a complete submittal package, i.e. record drawings, test results, inventory, etc. shall be submitted at the same time. Partial piecemeal submittals will be rejected without review.

A total of three hardcopies and two CD-ROMs or USB Drives of the final documentation shall be submitted. The identical material shall also be submitted in the same manner as the catalog cut submittals utilizing the following final documentation pay item numbers:

Pay Code	Description	Discipline
FDLRD000	Record Drawings - Lighting	Lighting
FDLCC000	Catalog Cuts - Lighting	Lighting
FDLWL000	Warranty - Lighting	Lighting
FDLTR000	Test Results - Lighting	Lighting
FDLINV00	Inventory - Lighting	Lighting
FDLGPS00	GPS - Lighting	Lighting
FDLES00	Electric Service - Lighting	Lighting

Record Drawings shall include Marked up plans, controller info, Electric Service Info, Equipment Settings, Manuals, Wiring Diagrams for each discipline.

Test results shall be all electrical test results.

GPS Documentation. In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following electrical components being installed, modified or being affected in other ways by this contract:

- All light poles and light towers.
- Handholes and vaults.
- Junction Boxes
- Conduit roadway crossings.
- Controllers.
- Control Buildings.
- Structures with electrical connections, i.e. DMS, lighted signs.
- Electric Service locations.

Datum to be used shall be North American 1983.

Data shall be provided electronically. The electronic format shall be compatible with MS Excel. **Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places.** Each coordinate shall have the following information:

1. District
2. Description of item
3. Designation
4. Use
5. Approximate station
6. Contract Number
7. Date
8. Owner
9. Latitude
10. Longitude
11. Comments

A spreadsheet template will be available from the Engineer for use by the Contractor.

Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have minimum 5 meter accuracy after post processing.

GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years.”

The inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.

The Final Acceptance Documentation Checklist shall be completed and is contained elsewhere herein.

If CD's are used they shall be labeled as illustrated in the CD Label Template contained herein.

Acceptance. Acceptance of electrical work will be given at the time when the Village assumes the responsibility to protect and maintain the work according to Article 107.30 or at the time of final inspection.

When the electrical work is complete, tested, and fully operational, the Contractor shall schedule an inspection for acceptance with the Engineer no less than seven working days prior to the desired inspection date. The Contractor shall furnish the necessary labor and equipment to make the inspection.

A written record of the test readings taken by the Contractor according to Article 801.13 shall be furnished to the Engineer seven working days before the date the inspection is scheduled. Inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.

Final Acceptance Documentation Checklist

LOCATION			
Route		Common Name	
Limits		Section	
Contract #		County	
Controller Designation(s)		EMC Database Location Number(s)	
ITEM	Contractor (Verify)	Resident Engineer (Verify)	
Record Drawings			
-Three hardcopies (11" x 17")	☐	☐	
-PDFs as required elsewhere	☐	☐	
Field Inspection Tests			
-Voltage	☐	☐	
-Amperage	☐	☐	
-Cable Insulation Resistance	☐	☐	
-Continuity	☐	☐	
-Controller Ground Rod Resistance	☐	☐	
(Three Hardcopies & PDFs as required)	☐	☐	
GPS Coordinates			
-Excel file	☐	☐	
(Check Special Provisions, Excel file required.)			
Job Warranty Letter			
(Three Hardcopies & PDFs as required)	☐	☐	
Catalog Cut Submittals			
-Approved & Approved as Noted	☐	☐	
(PDFs as required)			
Lighting Inventory Form			
(Three Hardcopies & PDFs as required)	☐	☐	
Lighting Controller Inventory Form			
(Three Hardcopies & PDFs as required)	☐	☐	
Electric Service Documentation			
(Three Hardcopies & PDFs as required)	☐	☐	
Light Tower Inspection Form			
(If applicable, Three Hardcopies & PDFs as required)	☐	☐	

Three Hardcopies & PDFs as required shall be submitted for all items above. If a CD ROM is used it shall be labeled as shown in the example contained herein.

General Notes:

Record Drawings – The record drawings should contain contract cover sheet, summary of quantities showing all lighting pay item sheets, proposed lighting plans and lighting detail sheets. Submit hardcopies shall be 11” x 17” size. Temporary lighting plans and removal lighting plans should not be part of the set.

Field Inspection Tests – Testing should be done for proposed cables. Testing shall be per standard specifications. Forms shall be neatly filled out.

GPS Coordinates – Check special provisions “General Electrical Requirements”. Submit electronic “EXCEL” file.

Job Warranty Letter – See standard specifications.

Cutsheet Submittal – See special provisions “General Electrical Requirements”. Scan Approved and Approved as Noted cutsheets.

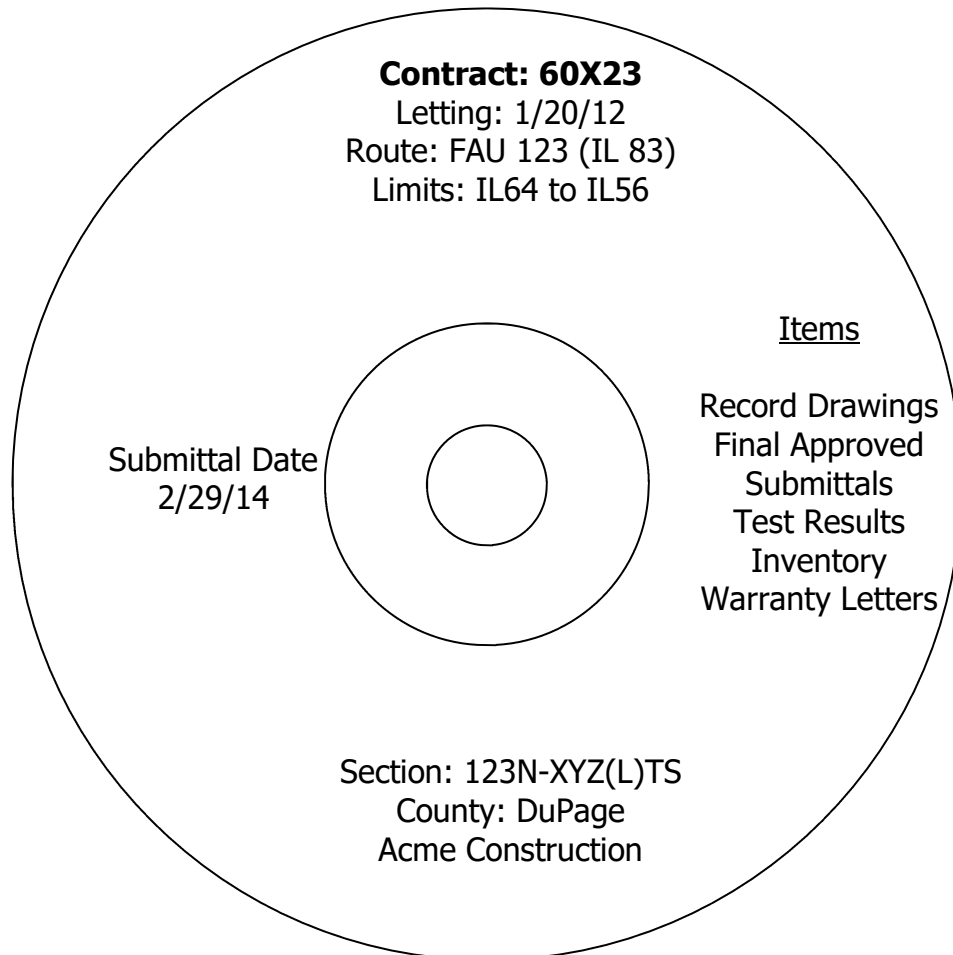
Lighting Inventory Form – Inventory form should include only proposed light poles, proposed light towers, proposed combination (traffic/light pole) lighting and proposed underpass luminaires.

Lighting Controller Inventory Form – Form should be filled out for only proposed lighting controllers.

Light Tower Safety Inspection Form – Form should be filled out for each proposed light tower.

CD LABEL FORMAT TEMPLATE.

Label must be printed; hand written labels are unacceptable and will be rejected.



ELECTRIC UTILITY SERVICE CONNECTION

Effective: July 1, 2025

Description. This item shall consist of payment for work performed by the Electric Service Provider (Utility Company) in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE LOCATION.

CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact the Electric Service Provider. The Contractor shall coordinate his work fully with the Electric Service Provider both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement.

For those locations served by ComEd; please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.

For locations served by other electric service providers, that utility shall be contacted.

The Contractor should make particular note of the need for the earliest attention to arrangements with the Electric Service Provider for service. In the event of delay by the Electric Service Provider, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Documentation. The Contractor shall provide copies of all correspondence with the Electric Service Provider including as a minimum:

- A copy of the request for service to the Electric Service Provider.
- Service Entrance Sketch
- Electric Service Account Number
- Electric Meter Number
- Size of Utility transformer and available fault current.
- GPS coordinates of the service, format as described in the General Electrical Provisions.

All correspondence for State owned and maintained installations must include the pertinent contract number and Electrical Maintenance database number

Certain state-maintained electrical systems may have energy paid by local agencies, but unless otherwise established, energy billing for state-maintained electrical systems shall be directed to:

Illinois Department of Transportation
District 1
201 West Center Court
Schaumburg, Illinois 60196
Attn: Financial Services

Electric service correspondence for Non-State owned systems shall be directed to the respective agency assuming maintenance with a copy of the final service agreement submitted to IDOT.

Method Of Payment. The Contractor will be reimbursed to the exact amount of money as billed by the Electric Service Provider for the services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$5,000.00

Basis Of Payment. This work will be paid for at the contract lump sum price for **ELECTRIC UTILITY SERVICE CONNECTION** which shall be reimbursement in full for electric utility service charges.

ELECTRIC SERVICE INSTALLATION

Effective: January 1, 2012

Description. This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

Materials. Materials shall be in accordance with the Standard Specifications.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not included by other contract pay items required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

Method Of Measurement. Electric Service Installation shall be counted, each.

Basis Of Payment. This work will be paid for at the contract unit price each for **ELECTRIC SERVICE INSTALLATION** which shall be payment in full for the work specified herein.

WIRE AND CABLE

Effective: January 1, 2012

Add the following to the first paragraph of Article 1066.02(a):

“The cable shall be rated at a minimum of 90°C dry and 75°C wet and shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals.”

Revise the Aerial Electric Cable Properties table of Article 1066.03(a)(3) to read:

Aerial Electric Cable Properties

Phase Conductor				Messenger wire	
Size AWG	Stranding	Average Insulation Thickness		Minimum Size AWG	Stranding
		mm	mils		
6	7	1.1	(45)	6	6/1
4	7	1.1	(45)	4	6/1
2	7	1.1	(45)	2	6/1
1/0	19	1.5	(60)	1/0	6/1
2/0	19	1.5	(60)	2/0	6/1
3/0	19	1.5	(60)	3/0	6/1
4/0	19	1.5	(60)	4/0	6/1

Add the following to Article 1066.03(b) of the Standard Specifications:

“Cable sized No. 2 AWG and smaller shall be U.L. listed Type RHH/RHW and may be Type RHH/RHW/USE. Cable sized larger than No. 2 AWG shall be U.L. listed Type RHH/RHW/USE.”

Revise Article 1066.04 to read:

“Aerial Cable Assembly. The aerial cable shall be an assembly of insulated aluminum conductors according to Section 1066.02 and 1066.03. Unless otherwise indicated, the cable assembly shall be composed of three insulated conductors and a steel reinforced bare aluminum conductor (ACSR) to be used as the ground conductor. Unless otherwise indicated, the code word designation of this cable assembly is “Palomino”. The steel reinforced aluminum conductor shall conform to ASTM B-232. The cable shall be assembled according to ANSI/ICEA S-76-474.”

Revise the second paragraph of Article 1066.05 to read:

“The tape shall have reinforced metallic detection capabilities consisting of a woven reinforced polyethylene tape with a metallic core or backing.”

UNIT DUCT

Effective: January 1, 2012

Revise the first paragraph of Article 810.04 to read:

“The unit duct shall be installed at a minimum depth of 30-inches (760 mm) unless otherwise directed by the Engineer.”

Revise Article 1088.01(c) to read:

“(c) Coilable Nonmetallic Conduit.

General:

The duct shall be a plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The duct shall be a plastic duct which is intended for underground use and can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance.

The duct shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethylene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

The duct shall be UL Listed per 651-B for continuous length HDPE coiled conduit. The duct shall also comply with NEC Article 354.100 and 354.120.

Submittal information shall demonstrate compliance with the details of these requirements.

Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D2447. Submittal information shall demonstrate compliance with these requirements.

Nominal Size		Nominal I.D.		Nominal O.D.		Minimum Wall	
mm	in	mm	in	mm	in	mm	in
31.75	1.25	35.05	1.380	42.16	1.660	3.556 +0.51	0.140 +0.020
38.1	1.50	40.89	1.610	48.26	1.900	3.683 +0.51	0.145 +0.020

Nominal Size		Pulled Tensile	
mm	in	N	lbs
31.75	1.25	3322	747
38.1	1.50	3972	893

Marking:

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 3.05 meters (10 feet) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

Performance Tests:

Polyethylene Duct testing procedures and test results shall meet the requirements of UL 651. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	lbs
35	1.25	4937	1110
41	1.5	4559	1025

LUMINAIRE, LED, ROADWAY

Description.

This work shall consist of furnishing and installing a roadway LED luminaire as shown on the plans, as specified herein. The luminaire shall be Verde Green to match the color of the traffic signal poles. Color shall be approved by local agency before purchasing.

General.

The luminaire including the housing, driver and optical assembly shall be assembled in the U.S.A. The luminaire shall be assembled by and manufactured by the same manufacturer. The luminaire shall be mechanically strong and easy to maintain. The size, weight, and shape of the luminaire shall be designed so as not to incite detrimental vibrations in its respective pole and it shall be compatible with the pole and arm. All electrical and electronic components of the luminaire shall comply with the requirements of Restriction of Hazardous Materials (RoHS) regulations. The luminaire shall be listed for wet locations by an NRTL and shall meet the requirements of UL 1598 and UL 8750.

Submittal Requirements.

The Contractor shall also submit the following manufacturer's product data for each type of luminaire:

1. Descriptive literature and catalogue cuts for luminaire, LED driver, and surge protection device. Completed manufacturer's luminaire ordering form with the full catalog number provided
2. LED drive current, total luminaire input wattage and total luminaire current at the system operating voltage or voltage range and ambient temperature of 25 C.
3. LED efficacy per luminaire expressed in lumens per watt (l/w).
4. Initial delivered lumens at the specified color temperature, drive current, and ambient temperature.
5. IES file associated with each submitted luminaire in the IES LM-63 format.
6. Computer photometric calculation reports as specified and in the luminaire performance table.
7. TM-15 BUG rating report.
8. Isofootcandle chart with max candela point and half candela trace indicated.
9. Documentation of manufacturers experience and verification that luminaires were assembled in the U.S.A. as specified.
10. Written warranty.

Upon request by the Engineer, the submittals shall also include any or all the following:

- a. TM-21 calculator spreadsheet (XLSX or PDF format) and if available, TM-28 report for the specified luminaire or luminaire family. Both reports shall be for 50,000 hours at an ambient temperature of 77 °F (25 °C).
- b. LM-79 report with National Voluntary Laboratory Accreditation Program (NVLAP) current at the time of testing in PDF format inclusive of the following: isofootcandle diagram with half candela contour and maximum candela point; polar plots through maximum plane and maximum cone; coefficient of utilization graph; candela table; and spectral distribution graph and chromaticity diagram.
- c. LM-80 report for the specified LED package in PDF format and if available, LM-84 report for the specified luminaire or luminaire family in PDF format. Both reports shall be conducted by a laboratory with NVLAP certification current at the time of testing.
- d. AGi32 calculation file matching the submittal package.

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

A sample luminaire shall also be provided upon request of the Engineer. The sample shall be as proposed for the contract and shall be delivered by the Contractor to the District Headquarters. After review, the Contractor shall retrieve the luminaire.

Manufacturer Experience.

The luminaire shall be designed to be incorporated into a lighting system with an expected 20 year lifetime. The luminaire manufacturer shall have a minimum of 15 years' experience manufacturing LED roadway luminaires; parking lot, architectural, or residential luminaires are not applicable to this requirement. The manufacturer shall have a minimum of 100,000 total LED roadway luminaires installed on a minimum of 100 separate installations, all within the U.S.A.

Housing.

Material. The luminaire shall be a single device not requiring on-site assembly for installation. The driver for the luminaire shall be integral to the unit.

Finish. The luminaire shall have a baked acrylic enamel finish. The color of the finish shall be verde green to match the proposed traffic signal poles.

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

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

The luminaire shall slip-fit on a mounting arm with a 2" diameter tenon (2.375" outer diameter), and shall have a barrier to limit the amount of insertion. The slip fitter clamp shall utilize four (4) bolts to clamp to the tenon arm. The luminaire shall be provided with a leveling surface and shall be capable of being tilted ± 5 degrees from the axis of attachment in 2.5 degree increments and rotated to any degree with respect to the supporting arm.

All external surfaces shall be cleaned in accordance with the manufacturer's recommendations and be constructed in such a way as to discourage the accumulation of water, ice, and debris.

The effective projected area of the luminaire shall not exceed 1.6 sq. ft.

The total weight including accessories, shall not exceed 40 lb (18.14 kg).

A passive cooling method with no moving, rotating parts, or liquids shall be employed for heat management.

The luminaire shall include a fully prewired, 7-pin twist lock ANSI C136.41-compliant receptacle. Unused pins shall be connected as directed by the Manufacturer and as approved by the Engineer. A shorting cap shall be provided with the luminaire that is compliant with ANSI C136.10.

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

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

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

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

Luminaires shall be designed to be easily serviced, having fasteners such as quarter-turn clips of the heavy spring-loaded type with large, deep straight slot heads, complete with a receptacle and shall be according to military specification MIL-f-5591.

All hardware shall be captive and not susceptible to falling from the luminaire during maintenance operations. This shall include lens/lens frame fasteners as well hardware holding the removable driver and electronic components in place.

Provisions for any future house-side external or internal shielding should be indicated along with means of attachment.

Circuiting shall be designed to minimize the impact of individual LED failures on the operation of the other LED's.

Wiring. Wiring within the electrical enclosure shall be rated at 600v, 105°C or higher.

Driver.

The driver shall be integral to the luminaire shall be capable of receiving an indefinite open and short circuit output conditions without damage.

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

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

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

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

Surge Protection. The luminaire shall comply the requirements of ANSI C136.2 for electrical transient immunity at the "Extreme" level (20KV/10KA) and shall be equipped with a surge protective device (SPD) that is UL1449 compliant with indicator light. An SPD failure shall open the circuit to protect the driver.

LED Optical Assembly

The optical assembly shall have an IP 65 or higher rating in accordance with ANSI C136.25. The circuiting of the LED array shall be designed to minimize the effect of individual LED failures on

the operation of other LEDs. All optical components shall be made of glass or a UV stabilized, non-yellowing material.

The optical assembly shall utilize high brightness, long life, minimum 70 CRI, 4,000K color temperature (+/-300K) LEDs binned in accordance with ANSI C78.377. Lenses shall be UV-stabilized acrylic or glass.

Lumen depreciation at 50,000 hours of operation shall not exceed 15% of initial lumen output at the specified LED drive current and an ambient temperature of 25° C.

The luminaire may or may not have a glass lens over the LED modules. If a glass lens is used, it must be a flat lens. Material other than glass will not be acceptable. If a glass lens is not used, the LED modules may not protrude lower than the luminaire housing.

The assembly shall have individual serial numbers or other means for manufacturer tracking.

Photometric Performance.

Luminaires shall be tested according to IESNA LM-79. This testing shall be performed by a test laboratory holding accreditation from the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) for the IESNA LM-79 test procedure.

Data reports as a minimum shall yield an isofootcandle chart, with max candela point and half candela trace indicated, maximum plane and maximum cone plots of candela, a candlepower table (house and street side), a coefficient of utilization chart, a luminous flux distribution table, spectral distribution plots, chromaticity plots, and other standard report outputs of the above mentioned tests.

The luminaire shall have a BUG rating of Back Light B3 or less, Up Light rating of U0, and a Glare rating of G3 or less unless otherwise indicated in the luminaire performance table.

Photometric Calculations.

Calculations. Submitted report shall include a luminaire classification system graph with both the recorded lumen value and percent lumens by zone along with the BUG rating according to IESNA TM-15.

Complete point-by-point luminance and veiling luminance calculations as well as listings of all indicated averages and ratios as applicable shall be provided in accordance with IESNA RP-8 recommendations. Lighting calculations shall be performed using AGi32 software with all luminance calculations performed to one decimal place (i.e. x.x cd/m²). Uniformity ratios shall also be calculated to one decimal place (i.e. x.x:1). Calculation results shall demonstrate that the submitted luminaire meets the lighting metrics specified in the project Luminaire Performance Table(s). Values shall be rounded to the number of significant digits indicated in the luminaire performance table(s).

FAP 0348 Waukegan Road
Section 22-00206-00-CH
Contract 61K82
Village of Glenview
Cook County

All photometry must be **photopic**. Scotopic or mesopic factors will not be allowed. The AGi32 file shall be submitted at the request of the Engineer.

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE ROADWAY LIGHTING

GIVEN CONDITIONS

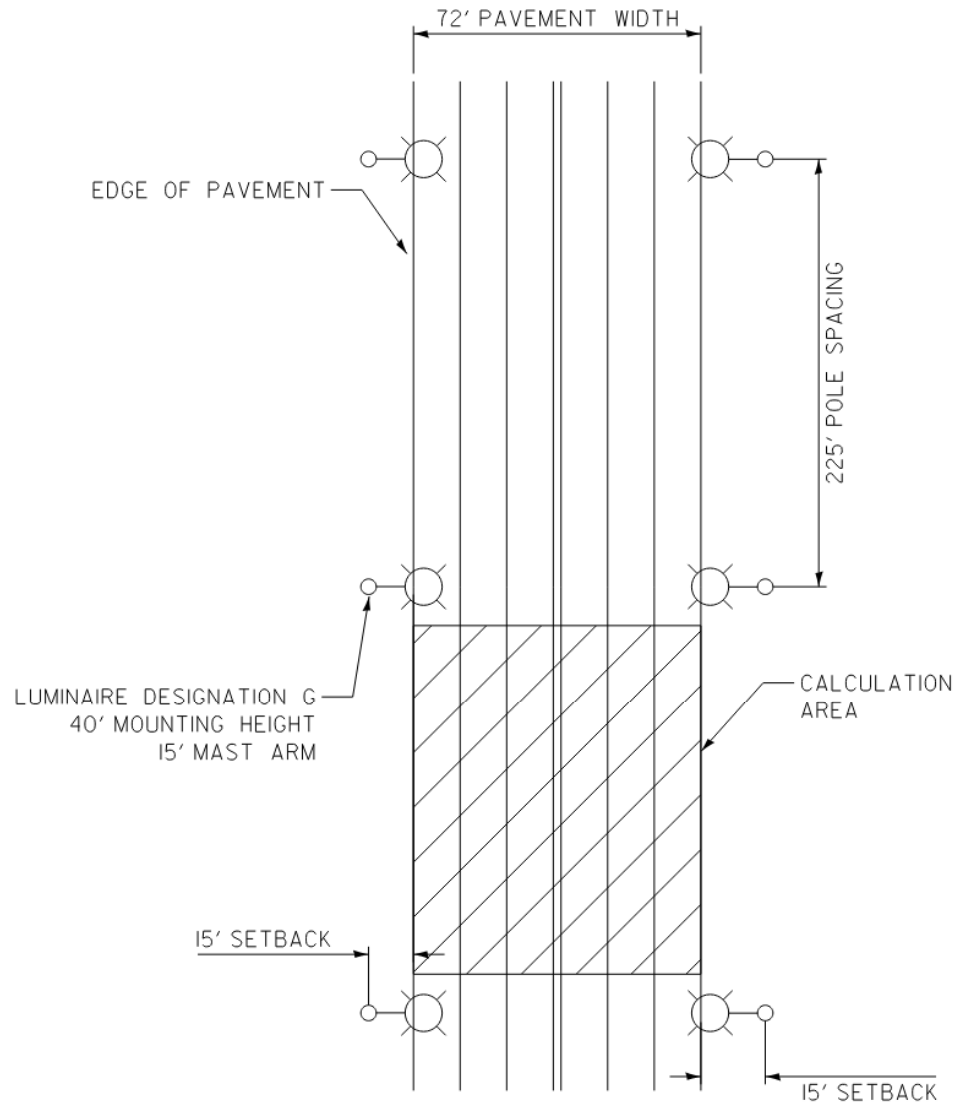
Roadway Data	Pavement Width	72	Ft
	Number of Lanes Left of Median	3	
	Number of Lanes Right of Median	3	
	Lane Width	12	Ft
	Median Width	0	Ft
	IES Surface Classification	R3	
	Q-Zero Value	0.07	
Mounting Data	Mounting Height	40	Ft
	Mast Arm Length	15	Ft
	Pole Set-Back from Edge of Pavement	15	Ft
Luminaire Data	Source	LED	
	Color Temperature	4000	°K
	Lumens	19,000	Min
	Pay Item Lumen Designation	G	
	BUG Rating	B3-U0-G3	
	IES Vertical Distribution	Medium	
	IES Control of Distribution	Cutoff	
	IES Lateral Distribution	Type III	
	Total Light Loss Factor	0.75	
Pole Layout Data	Spacing	225	Ft
	Configuration	Opposite	
	Luminaire Overhang over E.O.P.	0	Ft

NOTE: Variations from the above specified I.E.S. distribution pattern may be requested, and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

Roadway Luminance	Average Luminance, L_{AVE} (Max)	1.2	Cd/m ²
	Average Luminance, L_{AVE} (Min)	0.9	Cd/m ²
	Uniformity Ratio, L_{AVE}/L_{MIN}	3.0	Max
	Uniformity Ratio, L_{MAX}/L_{MIN}	5.0	Max
	Veiling Luminance Ratio, L_V/L_{AVE}	0.3	Max



East Lake Avenue and Waukegan Road
Village of Glenview

**PROPOSED LIGHTING
72 FT PAVEMENT WIDTH
LUMINAIRE DESIGNATION G**



Not to Scale

March 3, 2025

Independent Testing

When a contract has 50 or more luminaires of the same type (distribution type and lumen output/wattage), that luminaire type shall be independently tested, unless otherwise noted. The quantity of luminaires to be tested shall be as specified in the following table.

Contract Quantity	Luminaires to be Tested
1-49	0 (unless otherwise noted)
50-100	2
101-150	3
151-200	4
201-250	5
251-300	6
301-350	7

The Contractor shall coordinate the testing with the contract schedule considering submittal, manufacturing, testing, and installation lead-times and deadlines.

The Electrical Engineer shall select from all the project luminaires at the Contractor's or distributor's storage facility, within District 1, the luminaires for testing. In all cases, the selection of luminaires shall be a random selection from the entire completed lot of luminaires required for the contract. Selections from partial lots will not be allowed. An additional luminaire shall also be selected for physical inspection by the Engineer at the District Headquarters. This luminaire will be available for the Contractor to pick up at a later date to be installed under this contract. This luminaire is in addition to the luminaire required as a part of the submittal process specified elsewhere.

Alternative selection process. With the Engineer's prior approval, the Contractor shall provide a list of luminaire serial numbers for all the luminaires. The Engineer shall make a random selection of the required number of luminaires for testing from the serial numbers. That luminaire must then be photographed clearly showing the serial number prior to shipment to the selected and approved testing laboratory. The testing laboratory shall include a photograph of the luminaire along with the test results directly to the Engineer.

Luminaires shall be tested at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory approved for each of the required tests. The testing facility shall not be associated in any way, subsidiary or otherwise, with the luminaire manufacturer. All costs associated with luminaire testing shall be included in the bid price of the luminaire.

The selection of the proposed independent laboratory shall be presented with the information submitted for review and approval.

The testing performed shall include photometric and electrical testing.

All tests shall be conducted at the luminaire system operating voltage of 240 volts unless specified differently in the contract plans.

Photometric testing shall be according to IES recommendations, performed with a goniophotometer and as a minimum, shall yield an isofootcandle chart, with max candela point and half candela trace indicated, an isocandela diagram, maximum planned and maximum cone plots of candela, a candlepower table (House and street side), a coefficient of utilization chart, a luminous flux distribution table, BUG rating report, and complete calculations based on specified requirements and test results.

Electrical testing shall conform to NEMA and ANSI standards and, as a minimum shall include a complete check of wiring connections and a table of characteristics showing input amperes, watts, power factor, total harmonic distortion and LED drive current.

The summary report and the test results including IES photometric files shall be sent directly to the Resident Engineer, the Electrical Engineer, and the Contractor via email or other mutually agreeable means.

Photometric performance shall meet or exceed that of the specified values. If the luminaire does not meet the specified photometric values, the luminaire has failed regardless of whether the test results meet the submitted factory data.

Should any of the tested luminaires of a given type, and distribution fail to satisfy the specifications and perform according to approved submittal information, the luminaire type of that distribution type and wattage shall be unacceptable and be replaced by alternate equipment meeting the specifications with the submittal and testing process repeated in their entirety; or corrections made to achieve required performance.

In the case of corrections, the Contractor shall advise the Engineer of the proposed corrections and shall request a repeat of the specified testing and, if the corrections are deemed reasonable by the Engineer, the testing process shall be repeated in its entirety.

The number of luminaires to be tested shall be the same quantity as originally tested as required in the above table.

Retesting, should it become necessary, shall not be grounds for additional compensation or extension of time.

Submittal information shall include a statement of intent to provide the testing as well as a request for approval of the chosen laboratory.

Installation.

Each luminaire shall be installed according to the luminaire manufacturer's recommendations.

Luminaires which are pole mounted shall be mounted on site such that poles and arms are not left unloaded. Pole mounted luminaires shall be leveled/adjusted after poles are set and vertically aligned before being energized. When mounted on a tenon, care shall be exercised to assure

maximum insertion of the mounting tenon. Each luminaire shall be checked to assure compatibility with the project power system. When the night-time check of the lighting system by the Engineer indicates that any luminaires are mis-aligned, the mis-aligned luminaires shall be corrected at no additional cost.

No luminaire shall be installed prior to approval. Where independent testing is required, full approval will not be given until complete test results, demonstrating compliance with the specifications, have been reviewed and accepted by the Engineer.

Pole wiring shall be provided with the luminaire. Pole wire shall run from handhole to luminaire. Pole wire shall be sized No. 10, rated 600 V, RHW/USE-2, and have copper conductors, stranded in conformance with ASTM B 8. Pole wire shall be insulated with cross-linked polyethylene (XLP) insulation. Pole wire shall include a phase, neutral, and green ground wire. Wire shall be trained within the pole or sign structure so as to avoid abrasion or damage to the insulation.

Pole wire shall be extended through the pole, pole grommet, luminaire ring, and any associated arm and tenon. The pole wire shall be terminated in a manner that avoids sharp kinks, pinching, pressure on the insulation, or any other arrangement prone to damaging insulation value and producing poor megger test results. Wires shall be trained away from heat sources within the luminaire. Wires shall be terminated so all strands are extended to the full depth of the terminal lug with the insulation removed far enough so it abuts against the shoulder of the lug, but is not compressed as the lug is tightened.

Included with the pole wiring shall be fusing located in the handhole. Fusing shall be according to Article 1065.01 with the exception that fuses shall be 6 amperes.

Each luminaire and optical assembly shall be free of all dirt, smudges, etc. Should the optical assembly require cleaning, a luminaire manufacturer approved cleaning procedure shall be used.

Horizontal mount luminaires shall be installed in a level, horizontal plane, with adjustments as needed to insure the optics are set perpendicular to the traveled roadway.

When the pole is bridge mounted, a minimum size stainless steel 1/4-20NC set screw shall be provided to secure the luminaire to the mast arm tenon. A hole shall be drilled and tapped through the tenon and luminaire mounting bracket and then fitted with the screw.

Warranty.

The entire luminaire and all of its component parts shall be covered by a 10-year warranty. Failure is when one or more of the following occur:

- 1) Negligible light output from more than 10 percent of the discrete LEDs.
- 2) Significant moisture that deteriorates performance of the luminaire.
- 3) Driver that continues to operate at a reduced output due to overheating.

The warranty period shall begin on the date of luminaire delivery. The Contractor shall verify that the Resident Engineer has noted the delivery date in the daily diary. Copy of the shipment and delivery documentation shall be submitted with the final documentation.

The replacement luminaire shall be of the same manufacturer, model, and photometric distribution as the original.

Method of Measurement.

The rated initial minimum luminous flux (lumen output) of the light source, as installed in the luminaire, shall be according to the following table for each specified output designation.

Designation Type	Minimum Initial Luminous Flux	Designation Type	Minimum Initial Luminous Flux
A	2,200	F	12,500
B	3,150	G	15,500
C	4,400	H	25,200
D	6,300	I	33,000
E	9,450		

Where delivered lumens is defined as the minimum initial delivered lumens at the specified color temperature. Luminaires with an initial luminous flux less than the values listed in the above table will not be acceptable even if they meet the requirements given in the Luminaire Performance table shown in the contract.

Basis of Payment.

This work will be paid for at the contract unit price per each for **LUMINAIRE, LED, ROADWAY**, of the output designation specified.

MAINTENANCE OF LIGHTING SYSTEMS

Effective: December 1, 2024

Replace Article 801.11 and 801.12 of the Standard Specifications with the following:

Effective the date the Contractor's activities (electrical or otherwise) at the job site begin, the Contractor shall be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by the work until final acceptance or as otherwise determined by the Engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. During the maintenance preconstruction inspection, the party responsible for existing maintenance shall perform testing of the existing system in accordance with Article 801.13a. The Contractor shall request a date for the preconstruction inspection no less than fourteen (14) days prior to the desired date of the inspection.

The Engineer will document all test results and note deficiencies. All substandard equipment will be repaired or replaced by the existing maintenance contractor, or the Engineer can direct the Contractor to make the necessary repairs under Section 109.04.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained. Contract documents shall indicate the circuit limits.

Maintenance of Existing Lighting Systems

Existing lighting systems. Existing lighting systems shall be defined as any lighting system or part of a lighting system in service at the time of contract Letting regardless of the number of lighting controllers involved. The contract drawings indicate the general extent of any existing lighting, but whether indicated or not, it remains the Contractor's responsibility to ascertain the extent of effort required for compliance with these specifications and failure to do so will not be justification for extra payment or reduced responsibilities.

Extent of Maintenance.

Partial Maintenance. Unless otherwise indicated, if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in each controller and the controller is not part of the contract work, the Contractor needs only to maintain the affected circuits within the project limits. The project limits are defined as those limits indicated in the contract plans. Equipment outside of the project limits, on the affected circuits shall be maintained and paid for under Article 109.04. The affected circuits shall be isolated by means of in-line waterproof fuse holders as specified elsewhere and as approved by the Engineer. The unaffected circuits and the controller will remain under the maintenance of the State.

Full Maintenance. If the number of circuits affected by the contract is greater than 40% of the total number of circuits in each controller, or if the controller is modified in any way under the contract work, the Contractor shall maintain the entire controller and all associated circuits within the project limits. Equipment outside of the project limits shall be maintained and paid for under Article 109.04.

If the existing equipment is damaged by normal vehicular traffic, not contractor operations, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind with payment made for such equipment under Article 109.04. If the equipment damaged by any construction operations, not normal vehicular traffic, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind and the cost of the equipment shall be included in the cost of this pay item and shall not be paid for separately.

Maintenance of Proposed Lighting Systems

Proposed Lighting Systems. Proposed lighting systems shall be defined as any lighting system or part of a lighting system, temporary or permanent, which is to be constructed under this contract regardless of the project limits indicated in the plans.

The Contractor shall be fully responsible for maintenance of all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, vandalism, or other means. The potential cost of replacing or repairing any malfunctioning, damaged, or vandalized equipment shall be included in the bid price of this item and will not be paid for separately.

The Contractor shall be responsible for locating cables installed under this contract to prevent damage from construction operations.

Lighting System Maintenance Operations

The Contractor's responsibility shall include all applicable responsibilities of the Electrical Maintenance Contract, State of Illinois, Department of Transportation, Division of Highways, District One. These responsibilities shall include the maintenance of lighting units (including sign lighting), cable runs and lighting controls. Responsibilities shall also include the coordination and installation of replacement equipment for existing equipment which has failed within the warranty period for that equipment. The coordination shall include correspondence with the manufacturer regarding the warranty claim. In the case of a pole knockdown or sign light damage, the Contractor shall promptly clear the lighting unit and circuit discontinuity and restore the system to service. The equipment shall then be re-set by the contractor within the time limits specified herein.

If the existing equipment is damaged by normal vehicular traffic, not contractor operations, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind with payment made for such equipment under Article 109.04. If the equipment damaged by any construction operations, not normal vehicular traffic, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind and the cost of the equipment shall be included in the cost of this pay item and shall not be paid for separately.

Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected within 24 hours of the patrol. Patrol reports shall be presented on standard forms as designated by the Engineer.

Uncorrected deficiencies may be designated by the Engineer as necessitating emergency repairs as described elsewhere herein.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Radio problem	1 hour	4 hours	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey or reported to EMC	na	na	7 Calendar days
Navigation light outage	na	na	24 hours

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.
- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)
- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed

within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from any monies owed to the Contractor. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Maintenance Contractor being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

Operation of Lighting

The lighting shall be operational every night, dusk to dawn. Duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Lighting systems shall not be kept in operation during long daytime periods.

Method of Measurement

The contractor shall demonstrate to the satisfaction of the Engineer that the lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request. Months in which the lighting systems are not maintained and not operational will not be paid. Payment shall not be made retroactively for months in which lighting systems were not operational.

Basis of Payment. Maintenance of lighting systems shall be paid for at the contract unit price per calendar month for **MAINTENANCE OF LIGHTING SYSTEM.**

LUMINAIRE, LED, SPECIAL

Description. This work shall consist of furnishing and installing LED lighting unit as specified herein, shown in the contract plans, and in accordance with Section 821 of the Standard Specifications.

Materials. The luminaires shall be American Electric Lighting Autobahn Series ATB0 and shall be in compliance with ANSI C136.37. The luminaire shall be BAA – Buy America(n) Act.

Luminaire, LED, Special is model number ATB0 P305 MVOLT R3

Material for the LED luminaire shall be according to the following:

Optics

- IP66 rated
- Type III (Luminaire, LED, Special) light distribution per IESNA classification.

Performance

- Rated for -40°C to 40°C ambient air temperature range
- Color temperature of 4000K
- Fixture wattage of 145 watts

Electronic Drivers

- Performance package is P305 at 20,439 lumens, multivolt, type III optic distribution.
- LED light engines are rated > 100,000 hours at 25°C, L70. Electric driver has a rated life of 100,000 hours at a 25°C ambient.
- Minimum of 20kV/10kA level of surge protection.

Housing

- Autobahn Series ATB0 is 27" long x 8" wide x 6-1/2" high with an approximate weight of 14 lbs.
- Die cast aluminum housing.
- Color: Verde Green to match the light pole (color must be approved by local agency before purchasing)
- The luminaire shall include a fully prewired, 7 pin twist lock ANSI C136-41 – compliant receptacle. Unused pins shall be connected as directed by the Manufacturer and approved by the Engineer. A shorting cap shall be provided with the luminaire.
- All luminaires shall be vibration tested and pass ANSI C136.31 requirements. Luminaires shall be rated for "3G" peak acceleration. Vibration testing shall be run using the same luminaire in all three axes.

Finish

- Housing is polyester powder-coated for durability and corrosion resistance.
- Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 7 (per ASTM D1654) after over 5,000 hours exposure to salt fog chamber (operate per ASTM B117)

Submittal Requirements. The Contractor shall submit, for approval, an electronic version of all associated luminaire IES files, AGI32 files and the TM-21 or TM-28 calculator spreadsheet with inputs and reports associated with the project luminaires. The Contractor shall also provide (as a minimum) an electronic (PDF) version of each of the following manufacturer's product data for each type of luminaire:

1. Descriptive literature and catalogue cuts for luminaire, LED driver, and surge protection device.
2. LED drive current, total luminaire input wattage and total luminaire current at the system operating voltage or voltage range and ambient temperature of 25 C.
3. LED efficacy per luminaire expressed in lumens per watt (lpw).
4. Initial delivered lumens at the specified color temperature, drive current, and ambient temperature.
5. Computer photometric calculation reports as specified and in the luminaire performance table.

6. TM-15 BUG rating report.
7. Isofootcandle chart with max candela point and half candela trace indicated.
8. Documentation of manufacturers experience and verification that luminaires were assembled in the U.S.A. as specified.
9. Supporting documentation of compliance with ANSI standards as well as UL listing as specified.
10. Supporting documentation of laboratory accreditations and certifications for specified testing as indicated.
11. Thermal testing documents as specified.
12. IESNA LM-79, LM-80 (or LM-84) and TM-21 (or TM-28) reports as specified.
13. Salt fog test reports and certification as specified.
14. Vibration Characteristics Test Reports and certification as specified.
15. Ingress Protection Test Reports as specified.
16. Written warranty.

No luminaire testing according to Article 1067.01(h) will be required.

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE
ROADWAY LIGHTING
Luminaire, LED, Special
GIVEN CONDITIONS

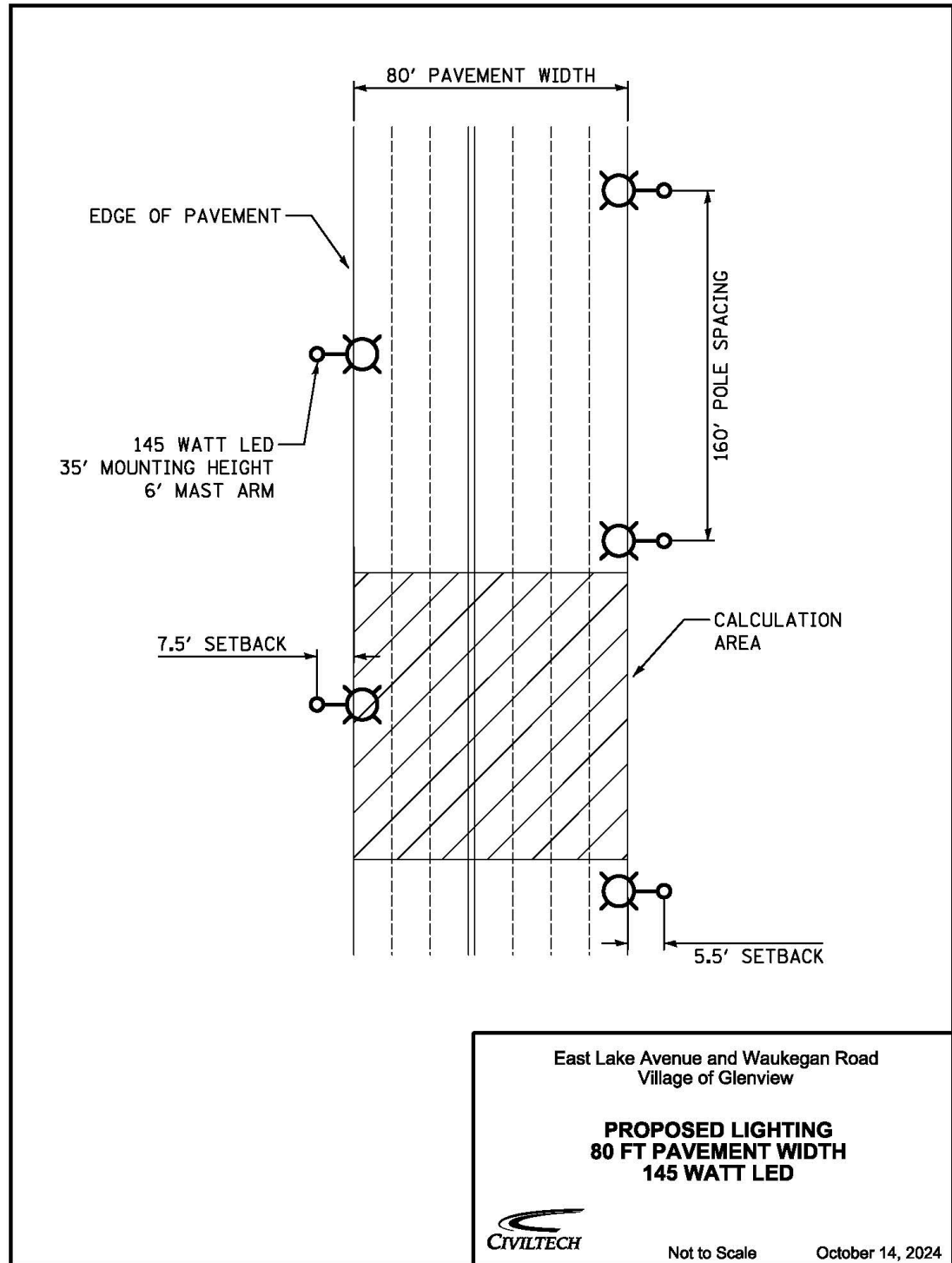
Roadway Data	Pavement Width	80	Ft
	Number of Lanes Left of Median	3	
	Number of Lanes Right of Median	4	
	Lane Width	11	Ft
	Median Width	3	Ft
	IES Surface Classification	R3	
	Q-Zero Value	0.07	
Mounting Data	Mounting Height	35	Ft
	Mast Arm Length	6	Ft
	Pole Set-Back from Edge of Pavement	5.5 and 7.5	Ft
Luminaire Data	Source	LED	
	Color Temperature	4000	°K
	Lumens	20,439	Min
	Pay Item Lumen Designation		
	BUG Rating	B3-U0-G3	
	IES Vertical Distribution	Medium	
	IES Control of Distribution		
	IES Lateral Distribution	Type III	
Pole Layout Data	Total Light Loss Factor	0.70	
	Spacing	160 (same side)	Ft
	Configuration	Staggered	
	Luminaire Overhang over E.O.P.	0.5 and -1.5	Ft

NOTE: Variations from the above specified I.E.S. distribution pattern may be requested, and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

Roadway Luminance	Average Luminance, L_{AVE} (Max)		Cd/m ²
	Average Luminance, L_{AVE} (Min)	0.9	Cd/m ²
	Uniformity Ratio, L_{AVE}/L_{MIN}	3.0	Max
	Uniformity Ratio, L_{MAX}/L_{MIN}	5.0	Max
	Veiling Luminance Ratio, L_v/L_{AVE}	0.3	Max



Installation.

Each luminaire shall be installed according to the luminaire manufacturer's recommendations.

Luminaires which are pole mounted shall be mounted on site such that poles and arms are not left unloaded. Pole mounted luminaires shall be leveled/adjusted after poles are set and vertically aligned before being energized. When mounted on a tenon, care shall be exercised to assure maximum insertion of the mounting tenon. Each luminaire shall be checked to assure compatibility with the project power system. When the night-time check of the lighting system by the Engineer indicates that any luminaires are mis-aligned, the mis-aligned luminaires shall be corrected at no additional cost.

Pole wiring shall be provided with the luminaire. Pole wire shall run from handhole to luminaire.

Pole wire shall be sized No. 10, rated 600 V, RHW/USE-2, and have copper conductors, stranded in conformance with ASTM B 8. Pole wire shall be insulated with cross-linked polyethylene (XLP) insulation. Wire shall be trained within the pole or sign structure so as to avoid abrasion or damage to the insulation.

Pole wire shall be extended through the pole, pole grommet, luminaire ring, and any associated arm and tenon. The pole wire shall be terminated in a manner that avoids sharp kinks, pinching, pressure on the insulation, or any other arrangement prone to damaging insulation value and producing poor megger test results. Wires shall be trained away from heat sources within the luminaire. Wires shall be terminated so all strands are extended to the full depth of the terminal lug with the insulation removed far enough so it abuts against the shoulder of the lug, but is not compressed as the lug is tightened.

Included with the pole wiring shall be fusing located in the handhole. Fusing shall be according to Article 1065.01.

Each luminaire and optical assembly shall be free of all dirt, smudges, etc. Should the optical assembly require cleaning, a luminaire manufacturer approved cleaning procedure shall be used.

Horizontal mount luminaires shall be installed in a level, horizontal plane, with adjustments as needed to insure the optics are set perpendicular to the traveled roadway.

When the pole is bridge mounted, a minimum size stainless steel 1/4-20NC set screw shall be provided to secure the luminaire to the mast arm tenon. A hole shall be drilled and tapped through the tenon and luminaire mounting bracket and then fitted with the screw.

Warranty.

The entire luminaire and all of its component parts shall be covered by a 10-year warranty. Failure is when one or more of the following occur:

- 1) Negligible light output from more than 10 percent of the discrete LEDs.
- 2) Significant moisture that deteriorates performance of the luminaire.

- 3) Driver that continues to operate at a reduced output due to overheating.

The warranty period shall begin on the date of luminaire delivery. The Contractor shall verify that the Resident Engineer has noted the delivery date in the daily diary. Copy of the shipment and delivery documentation shall be submitted with the final documentation.

The replacement luminaire shall be of the same manufacturer, model, and photometric distribution as the original.

Basis of Payment. This work will be paid for at the contract unit price per each as LUMINAIRE, LED, SPECIAL, as specified in the contract plans which shall include all labor, material and equipment necessary to complete the work as specified.

TEMPORARY WOOD POLE

Description. This work shall consist of furnishing and installing a temporary wood pole according to Section 830 of the Standard Specifications, as specified herein, and as directed by the Engineer.

The wood pole material shall be according to Illinois Department of Transportation Standard Specifications for Road and Bridge Construction in Article 1069.04. The wood pole shall be installed according to Illinois Department of Transportation Standard Specifications for Road and Bridge Construction in Article 830.03 (c) and 830.04.

When specified in the contract plans, a 15 foot truss style mast arm shall be installed on a wood pole with all the necessary hardware and accessories required. Additional mast arm required, when specified in the contract plans, will be paid for separately. The mast arm(s) shall be set at right angles to the centerline of the pavement.

Basis of Payment. This work will be paid for at the contract unit price per each for TEMPORARY WOOD POLE, 60 FOOT, CLASS 4, 15 FT MAST ARM; or TEMPORARY WOOD POLE, 50 FT., CLASS 4; which price shall be payment in full for the material including guy wire, excavation, labor, and equipment necessary to furnish and install the wood pole and work described herein.

TEMPORARY ELECTRIC SERVICE INSTALLATION

Description. This work shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which are over and above the work performed by the utility. This work shall be conducted according to Section 804 of the Standard Special Provision as specified herein.

The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not included by other contract pay items required to complete the electric service work in complete compliance with the requirements of the utility. Materials shall be in accordance with the Standard Specifications.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein.

The removal of the temporary electric service installation shall not be paid for separately but shall be included in this pay item.

Basis of Payment. This work shall be paid for at the contract unit price per each for TEMPORARY ELECTRIC SERVICE INSTALLATION, which price shall include all labor, material and equipment necessary to perform the work as specified herein. This item may apply to the work at more than one service location and each will be paid for separately.

TEMPORARY LUMINAIRE, LED, ROADWAY

Effective: November 1, 2024

Description.

This work shall consist of furnishing and installing a temporary roadway LED luminaire as shown on the plans, as specified herein.

General.

In order to expedite the roadway work, the luminaire may be new or previously used. **The luminaire shall be of the output designation specified and the distribution pattern specified in the plans.**

The luminaire shall remain the property of the Contractor.

The luminaire shall be listed for wet locations by an NRTL and shall meet the requirements of UL 1598 and UL 8750

Used luminaires shall be no older than five years old. Documentation shall be submitted to verify compliance with this requirement.

Submittal Requirements.

The Contractor shall submit manufacturer's product data for each type of luminaire including descriptive literature and catalogue cuts.

A sample luminaire shall also be provided upon request of the Engineer. The sample shall be as proposed for the contract and shall be delivered by the Contractor to the District Headquarters. After review, the Contractor shall retrieve the luminaire.

Housing.

The luminaire shall slip-fit on a mounting arm with a 2" diameter tenon (2.375" outer diameter). The luminaire shall be provided with a leveling surface and shall be capable of being tilted ± 5

degrees from the axis of attachment in 2.5 degree increments and rotated to any degree with respect to the supporting arm.

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

Wiring. Wiring within the electrical enclosure shall be rated at 600v, 105°C or higher.

Driver.

The driver shall have an input voltage range of 120 to 277 volts ($\pm 10\%$) or 347 to 480 volts ($\pm 10\%$) according to the contract documents.

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

Surge Protection. The luminaire shall comply the requirements of ANSI C136.2 for electrical transient immunity at the "Extreme" level (20KV/10KA) and shall be equipped with a surge protective device (SPD) that is UL1449 compliant with indicator light. An SPD failure shall open the circuit to protect the driver.

Installation.

Each luminaire shall be installed according to the luminaire manufacturer's recommendations.

Luminaires which are pole mounted shall be mounted on site such that poles and arms are not left unloaded. Pole mounted luminaires shall be leveled/adjusted after poles are set and vertically aligned before being energized. When mounted on a tenon, care shall be exercised to assure maximum insertion of the mounting tenon. Each luminaire shall be checked to assure compatibility with the project power system. When the night-time check of the lighting system by the Engineer indicates that any luminaires are mis-aligned, the mis-aligned luminaires shall be corrected at no additional cost.

No luminaire shall be installed prior to approval.

Pole wiring shall be provided with the luminaire. Pole wire shall run from handhole to luminaire. Pole wire shall be sized No. 10, rated 600 V, RHW/USE-2, and have copper conductors, stranded in conformance with ASTM B 8. Pole wire shall be insulated with cross-linked polyethylene (XLP) insulation. Pole wire shall include a phase, neutral, and green ground wire. Wire shall be trained within the pole or sign structure so as to avoid abrasion or damage to the insulation.

Pole wire shall be extended through the pole, pole grommet, luminaire ring, and any associated arm and tenon. The pole wire shall be terminated in a manner that avoids sharp kinks, pinching, pressure on the insulation, or any other arrangement prone to damaging insulation value and producing poor megger test results. Wires shall be trained away from heat sources within the luminaire. Wires shall be terminated so all strands are extended to the full depth of the terminal lug with the insulation removed far enough so it abuts against the shoulder of the lug, but is not compressed as the lug is tightened.

Included with the pole wiring shall be fusing located in the handhole. Fusing shall be according to Article 1065.01 with the exception that fuses shall be 6 amperes.

Each luminaire and optical assembly shall be free of all dirt, smudges, etc. Should the optical assembly require cleaning, a luminaire manufacturer approved cleaning procedure shall be used.

Horizontal mount luminaires shall be installed in a level, horizontal plane, with adjustments as needed to ensure the optics are set perpendicular to the traveled roadway.

When the pole is bridge mounted, a minimum size stainless steel 1/4-20NC set screw shall be provided to secure the luminaire to the mast arm tenon. A hole shall be drilled and tapped through the tenon and luminaire mounting bracket and then fitted with the screw.

Method of Measurement.

The rated initial minimum luminous flux (lumen output) of the light source, as installed in the luminaire, shall be according to the following table for each specified output designation.

Designation Type	Minimum Initial Luminous Flux	Designation Type	Minimum Initial Luminous Flux
A	2,200	F	12,500
B	3,150	G	15,500
C	4,400	H	25,200
D	6,300	I	33,000
E	9,450		

Where delivered lumens is defined as the minimum initial delivered lumens at the specified color temperature. Luminaires with an initial luminous flux less than the values listed in the above table will not be acceptable.

Basis of Payment.

This work will be paid for at the contract unit price per each for **TEMPORARY LUMINAIRE, LED, ROADWAY**, of the output designation specified.

TEMPORARY LIGHTING CONTROLLER

Description. This work shall consist of furnishing and installing an electrical controller as specified in Section 825 of the Standard Specifications and as specified herein.

The temporary lighting controller shall be 120/240 volt, 100 amps, single phase and 3 wires. The enclosure and control components may be used (not new) but must be able to function properly and safely according to Section 1068 of the Standard Specification and the National Electrical Code (NEC). The temporary lighting will be controlled by photocell mounted on the cabinet, there will be 4 - 30 amp single pole circuit breakers, and the cabinet and control components must be grounded.

The removal of the temporary lighting controller shall not be paid for separately but shall be included in this pay item. The temporary lighting controller shall not be removed until the proposed lighting is in place and the proposed lighting controller is functioning.

Basis of Payment. This work will be paid for at the contract unit price per each for TEMPORARY LIGHTING CONTROLLER, and shall include all material, labor and equipment necessary to perform the work as specified in the plan documentation and as herein specified.

LIGHT POLE (SPECIAL)

Description. This work shall consist of furnishing and installing a light pole complete with arms for this project according to Section 830 of the Standard Specifications and the details shown in the contract plans.

The light pole is a Hapco 33'-5 $\frac{3}{4}$ " tapered 16 sharp fluted aluminum pole with a 0.156" wall alloy 6063-T6. The mounting height of the luminaire will be 35 feet. The decorative pole base is a two piece cast aluminum base cover that is 4'-11 $\frac{11}{16}$ " high and is 10" diameter 16 fluted aluminum tube with a 0.219" wall alloy 6063-T6. The pole outer diameter at 4'-11 $\frac{11}{16}$ " high is 8" and tapers to 4.02" outer diameter at 33'-5 $\frac{3}{4}$ ". The light pole, decorative pole base, and base cover shall be Verde Green. Color shall be approved by local agency before purchasing.

The pole shall include two 15 amp GFCI duplex weather resistant receptacles with in use weatherproof cover.

The orientation of the lower luminaire shall face the sidewalk. See plans and details for orientation.

A Sternberg 6 foot mast arm model number RSA6 will be mounted 9 $\frac{1}{2}$ " from the top of pole. The pedestrian luminaire arm mounted at 16'-4" is Sternberg 478 scroll arm, model number 478-D-H-S-PMR-VG. Both mast arm and pedestrian luminaire arm will be Verde Green. Color shall be approved by local agency before purchasing.

Aluminum banner arms with cast aluminum ball will be installed on the pole for a 2'x6' banner. The banner arms will be Verde Green to match the light pole and the bottom banner arm will be mounted 18'-4.5".

Basis of Payment. This work will be paid for at the contract unit price per each for LIGHT POLE (SPECIAL); which price shall be payment in full for the material, equipment, and labor required to furnish and install the light pole as described herein and shown in the plans.

LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET

Description. This work shall consist of excavating, constructing, and backfilling offset light pole foundations in accordance with Section 836 of the Standard Specifications except as specified herein this special provision, and the details shown in the plans. Offset foundations shall be installed at locations where the utility conflict can be resolved by laterally offsetting the drilled shaft of the foundation.

The determination of foundation type shall be made in the field by the Engineer, based upon the actual locations of utilities. Payment will be made according quantity of each foundation type installed, and no additional compensation will be allowed for subtractions or additions to contract quantities for the various foundation types.

Excavation, including shoring, material disposal, and pumping, bailing or otherwise draining the excavated area shall not be paid for separately, but shall be included in the contract unit price for offset foundations.

Backfilling and thoroughly compacting material conforming to Article 1004 and shall not be paid for separately, but shall be considered as included in the contract unit price for offset foundations. Concrete shall cure in accordance with Article 1020.13 before being backfilled.

Basis of Payment. Offset foundations will be measured for payment in accordance with Article 836.04 of the Standard Specifications, and paid at the contract unit price per foot for LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET.

FLOOD LIGHTING UNIT

Description. This work shall consist of furnishing and installing flood lights as shown in the contract plans or as directed by the Engineer.

The flood light will be Hydrel SAF1 LED Specialty Architectural Flood light. The full aiming capability uses a knuckle assembly design with a taper-lock. The convex watershed lens will prevent water build up and staining.

The flood light will be a P2 performance package at 11 watt with a color temperature of 4000K at a 50 DEG distribution.

The flood light will be ground mounted on a cylindrical architectural junction box (CAJB) following manufacturer recommended installation. The wires will be spliced in the junction box.

Basis of Payment. This work will be paid for at the contract unit price per each for FLOOD LIGHTING UNIT, which price shall be payment in full for the material, equipment, and labor required to furnish and install the light as described herein and shown in the plans.

LUMINAIRE SHIELD

Description. This work shall consist of furnishing and installing a luminaire shield on luminaires according to manufacturer's recommendations.

The luminaire shield shall be installed on the luminaires as designated in the plans. Plans include one proposed shield location. Additional luminaire shields may be installed as determined by the Engineer. The contractor shall not procure additional shields beyond the one location shown in the plans without the approval of the Engineer. The shield should block light to private property. The shield shall be provided by the same manufacturer as the luminaire and shall be manufactured specifically to be attached to the proposed luminaire.

The color of the shield shall match the luminaire.

Basis of Payment. This work will be paid for at the contract unit price each for LUMINAIRE SHIELD which price shall include all labor, equipment and materials to complete the work specified herein.

BREAKAWAY DEVICE, COUPLING WITH ALUMINUM SKIRT OVER STAINLESS STEEL SCREEN

Description. This item shall consist of furnishing and installing a breakaway coupling with aluminum skirt over stainless steel screen on a pole foundation as specified in Section 838 of the "Standard Specifications for Road and Bridge Construction" and as specified herein.

The aluminum skirt shall be Verde Green and match the color of the light pole. The color must be approved by local agency before purchasing.

Method of Measurement: Breakaway coupling will be paid for as a set of 4 individual coupling with a skirt over stainless steel screen

Basis of Payment. This work will be paid for at the contract unit price per each for BREAKAWAY DEVICE, COUPLING WITH ALUMINUM SKIRT OVER STAINLESS STEEL SCREEN, which price shall be payment in full for the material, labor, and equipment necessary to furnish, install and complete the work described herein.

LUMINAIRE (SPECIAL)

Description. This work shall consist of furnishing and installing LED pedestrian luminaire at mid pole as specified herein, shown in the contract plans, and in accordance with Section 821 of the Standard Specifications.

Materials. The luminaires shall be Sternberg Acorn 1910LED series and shall be in compliance with ANSI C136.37. The luminaire including the housing, driver and optical assembly shall be assembled in the U.S.A. The luminaire shall be assembled by and manufactured by the same manufacturer.

Luminaire (Special) is model number 1910LEDLB-1L40T3-MDL06

Material for the LED luminaire shall be according to the following:

Optics

- IP66 rated against dust and water intrusion
- Type III light distribution per IESNA classification.

Performance

- Color temperature of 4000K
- Fixture wattage of 36 watts at 3880 lumens

Electronic Drivers

- Lumen maintenance in accordance with IESNA TM-21, based on LED manufacturer LM-80 test data no less than 6,000 hours and in-situ testing of the luminaire by an NVLAP accredited Energy Efficient Lighting Products lab.
- LEDs will have a predicted lumen depreciation of approximately 100,000 hours with greater than 70% of initial output at 25°C.
- High efficiency driver with a THD less than 20% and a high-power factor greater than 0.9.

Housing

- Cast aluminum housing with anodized aluminum heat sink.
- Color: Verde Green to match the light pole (color must be approved by local agency before purchasing)

Finish

- Housing is 6 stage polyester powder-coated paint system.
- Exceeds AAMA 2604, AAMA 2605, ASTM D523 AND ASTM D4214 requirements

Submittal Requirements. The Contractor shall submit, for approval, an electronic version of all associated luminaire IES files, AGi32 files and the TM-21 or TM-28 calculator spreadsheet with inputs and reports associated with the project luminaires. The Contractor shall also provide (as a minimum) an electronic (PDF) version of each of the following manufacturer's product data for each type of luminaire:

1. Descriptive literature and catalogue cuts for luminaire, LED driver, and surge protection device.
2. LED drive current, total luminaire input wattage and total luminaire current at the system operating voltage or voltage range and ambient temperature of 25 C.

3. LED efficacy per luminaire expressed in lumens per watt (lpw).
4. Initial delivered lumens at the specified color temperature, drive current, and ambient temperature.
5. Computer photometric calculation reports as specified and in the luminaire performance table.
6. TM-15 BUG rating report.
7. Isofootcandle chart with max candela point and half candela trace indicated.
8. Documentation of manufacturers experience and verification that luminaires were assembled in the U.S.A. as specified.
9. Supporting documentation of compliance with ANSI standards as well as UL listing as specified.
10. Supporting documentation of laboratory accreditations and certifications for specified testing as indicated.
11. Thermal testing documents as specified.
12. IESNA LM-79, LM-80 (or LM-84) and TM-21 (or TM-28) reports as specified.
13. Salt fog test reports and certification as specified.
14. Vibration Characteristics Test Reports and certification as specified.
15. Ingress Protection Test Reports as specified.
16. Written warranty.

No luminaire testing according to Article 1067.01(h) will be required.

Installation.

Each luminaire shall be installed according to the luminaire manufacturer's recommendations.

Luminaires which are pole mounted shall be mounted on site such that poles and arms are not left unloaded. Pole mounted luminaires shall be leveled/adjusted after poles are set and vertically aligned before being energized. When mounted on a tenon, care shall be exercised to assure maximum insertion of the mounting tenon. Each luminaire shall be checked to assure compatibility with the project power system. When the night-time check of the lighting system by the Engineer indicates that any luminaires are mis-aligned, the mis-aligned luminaires shall be corrected at no additional cost.

Pole wiring shall be provided with the luminaire. Pole wire shall run from handhole to luminaire.

Pole wire shall be sized No. 10, rated 600 V, RHW/USE-2, and have copper conductors, stranded in conformance with ASTM B 8. Pole wire shall be insulated with cross-linked polyethylene (XLP) insulation. Wire shall be trained within the pole or sign structure so as to avoid abrasion or damage to the insulation.

Pole wire shall be extended through the pole, pole grommet, luminaire ring, and any associated arm and tenon. The pole wire shall be terminated in a manner that avoids sharp kinks, pinching, pressure on the insulation, or any other arrangement prone to damaging insulation value and producing poor megger test results. Wires shall be trained away from heat sources within the luminaire. Wires shall be terminated so all strands are extended to the full depth of the terminal lug with the insulation removed far enough so it abuts against the shoulder of the lug, but is not compressed as the lug is tightened.

Included with the pole wiring shall be fusing located in the handhole. Fusing shall be according to Article 1065.01.

Each luminaire and optical assembly shall be free of all dirt, smudges, etc. Should the optical assembly require cleaning, a luminaire manufacturer approved cleaning procedure shall be used.

Horizontal mount luminaires shall be installed in a level, horizontal plane, with adjustments as needed to insure the optics are set perpendicular to the traveled roadway.

When the pole is bridge mounted, a minimum size stainless steel 1/4-20NC set screw shall be provided to secure the luminaire to the mast arm tenon. A hole shall be drilled and tapped through the tenon and luminaire mounting bracket and then fitted with the screw.

Warranty.

The entire luminaire and all of its component parts shall be covered by a 10-year warranty. Failure is when one or more of the following occur:

- 1) Negligible light output from more than 10 percent of the discrete LEDs.
- 2) Significant moisture that deteriorates performance of the luminaire.
- 3) Driver that continues to operate at a reduced output due to overheating.

The warranty period shall begin on the date of luminaire delivery. The Contractor shall verify that the Resident Engineer has noted the delivery date in the daily diary. Copy of the shipment and delivery documentation shall be submitted with the final documentation.

The replacement luminaire shall be of the same manufacturer, model, and photometric distribution as the original.

Basis of Payment. This work will be paid for at the contract unit price per each as LUMINAIRE (SPECIAL), as specified in the contract plans which shall include all labor, material and equipment necessary to complete the work as specified.

TEMPORARY MAST ARM, ALUMINUM, 15FT

Description. This item shall consist of furnishing and installing a temporary mast arm on a temporary wood pole. The installation shall conform to the details shown in the plans and Section 830 of the "Standard Specifications for Road and Bridge Construction", except as modified herein.

A 15 foot mast arm shall be installed on a temporary wood pole when specified with all the necessary hardware and accessories required.

Basis of Payment. This work will be paid for at the contract unit price per each for TEMPORARY MAST ARM, ALUMINUM, 15FT., which price shall be payment in full for the material, labor, and equipment necessary to furnish, install and complete the work described herein.

REMOVAL OF LIGHTING UNIT, SALVAGE

Description. This work shall consist of the removal of existing lighting system as described in Section 842 of the Standard Specification and as specified herein and shown in the contract plans.

The poles, mast arms, luminaires and cables in the light poles shall be removed and shall remain the property of the Village of Glenview. These items shall be delivered and unloaded at the Village of Glenview Public Works facility at 2498 East Lake Avenue or as directed by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per each for REMOVAL OF LIGHTING UNIT, SALVAGE, and shall include all labor, material and equipment necessary to perform the work as specified in the plan documentation and as herein specified

LIGHTING SYSTEM COMPLETE

Description. This work shall consist of furnishing and installing all of the lighting for the two gateway monuments at the corners of East Lake Avenue and Waukegan Road. The lighting includes the backlit lettering, under masonry seat wall strip lighting and village logo down lights. All work shall be according to Sections 812 and 817 of the Standard Specification, the National Electric Code and all applicable local codes.

General. The electrical contractor shall coordinate installation of conduit and junction boxes required to complete the installation of the lighting per the details in the plans with the gateway monument contractor. Equipment shall be placed to provide accessibility for

maintenance or replacement. Conduits and cabling shall not be visible. Junction boxes shall be placed on the back of walls hidden from main viewing directions. All lighting elements shall be installed per manufacturer's recommendations.

This work shall include are labor, materials and equipment to make all of the lighting elements described in this specification operational for their intended purpose.

Materials. Materials shall be according to the following:

Raceways Embedded in Structure – per Section 812.02 of Standard Specifications.
Cable in Raceway – per Section 817.02 of Standard Specifications.

Pinned back lit lettering – The letters shall be manufactured by Resno. The letters shall be S3 Slim Side Lit with Bitro tracer series FT2314X linear flexible LED lighting. The lighting shall be WarmWhite 3200K model FT2314X-12-WW32-5M.

Under masonry seat wall lighting – The strip lighting shall be manufactured by Beulux. The light strip shall be model 10°x10°, 3000K. The power supply shall be model DTR Dimming. The number of power supplies and power rating shall be based on strip lighting length and installation locations.

Surface mounted down light – The wall down light shall be manufactured by Aurora Light. The light shall be the Cascade (STW637104) with 3000K 4W LED and a Bronze Living Patina (BLP).

Submittals. The following items shall be submitted by the Contractor for approval by the Engineer:

Shop drawings illustrating all components of the lighting system. These drawings shall show complete design, installation and construction information in such detail as to enable the Engineer to determine the adequacy of the proposed installations for the intended purpose. The drawings must demonstrate that the design will comply with all applicable federal, state and local electrical codes and standards. Installation and construction information shall be included on the shop drawings.

Basis of Payment. This work will be paid for at the contract unit price per lump sum for LIGHTING SYSTEM COMPLETE.

LUMINAIRE SAFETY CABLE ASSEMBLY

Effective: January 1, 2012

Description: This item shall consist of providing a luminaire safety cable assembly as specified herein and as indicated in the plans.

Materials. Materials shall be according to the following:

Wire Rope. Cables (wire rope) shall be manufactured from Type 304 or Type 316 stainless steel having a maximum carbon content of 0.08 % and shall be a stranded assembly. Cables shall be 3.18 mm (0.125") diameter, 7x19 Class strand core and shall have no strand joints or strand splices.

Cables shall be manufactured and listed for compliance with Federal Specification RR-W-410 and Mil-DTL-83420.

Cable terminals shall be stainless steel compatible with the cable and as recommended by the cable manufacturer. Terminations and clips shall be the same stainless-steel grade as the wire rope they are connected to.

U-Bolts. U-Bolts and associated nuts, lock washers, and mounting plates shall be manufactured from Type 304 or Type 316 stainless steel.

CONSTRUCTION REQUIREMENTS

General. The safety cable assembly shall be installed as indicated in the plan details. One end of the cable assembly shall have a loop fabricated from a stainless steel compression sleeve. The other end of the cable assembly shall be connected with stainless steel wire rope clips as indicated. Slack shall be kept to a minimum to prevent the luminaire from creeping off the end of the mast arm. Unless otherwise indicated in the plans, the luminaire safety cable shall only be used in conjunction with luminaires which are directly above the traveled pavement.

Basis of Payment: This work shall be paid for at the contract price each for **LUMINAIRE SAFETY CABLE ASSEMBLY**, which shall be payment for the work as described herein and as indicated in the plans.

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 1.

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.

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

SPECIAL PROVISION
FOR
INSURANCE

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

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

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

Village of Glenview

Cook County

Glenview School District 34

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

State of Illinois
DEPARTMENT OF TRANSPORTATION
Bureau of Local Roads & Streets
SPECIAL PROVISION
FOR
LOCAL QUALITY ASSURANCE/ QUALITY MANAGEMENT QC/QA
Effective: January 1, 2022

Replace the first five paragraphs of Article 1030.06 of the Standard Specifications with the following:

“1030.06 Quality Management Program. The Quality Management Program (QMP) will be Quality Control / Quality Assurance (QC/QA) according to the following.”

Delete Article 1030.06(d)(1) of the Standard Specifications.

Revise Article 1030.09(g)(3) of the Standard Specifications to read:

“(3) If core testing is the density verification method, the Contractor shall provide personnel and equipment to collect density verification cores for the Engineer. Core locations will be determined by the Engineer following the document “Hot-Mix Asphalt QC/QA Procedure for Determining Random Density Locations” at density verification intervals defined in Article 1030.09(b). After the Engineer identifies a density verification location and prior to opening to traffic, the Contractor shall cut a 4 in. (100 mm) diameter core. With the approval of the Engineer, the cores may be cut at a later time.”

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

“(2) After final rolling and prior to paving subsequent lifts, the Engineer will identify the random density verification test locations. Cores or nuclear density gauge testing will be used for density verification. The method used for density verification will be as selected below.

Density Verification Method	
☒	Cores
☐	Nuclear Density Gauge (Correlated when paving ≥ 3,000 tons per mixture)

Density verification test locations will be determined according to the document “Hot-Mix Asphalt QC/QA Procedure for Determining Random Density Locations”. The density testing interval for paving wider than or equal to 3 ft (1 m) will be 0.5 miles (800 m) for lift thicknesses of 3 in. (75 mm) or less and 0.2 miles (320 m) for lift thicknesses greater than 3 in. (75 mm). The density testing interval for paving less than 3 ft (1 m) wide will be 1 mile (1,600 m). If a day’s paving will be less than the prescribed density testing interval, the length of the day’s paving will be the interval for that day. The density testing interval for mixtures used for patching will be 50 patches with a minimum of one test per mixture per project.

If core testing is the density verification method, the Engineer will witness the Contractor coring, and secure and take possession of all density samples at the

density verification locations. The Engineer will test the cores collected by the Contractor for density according to Illinois Modified AASHTO T 166 or AASHTO T 275.

If nuclear density gauge testing is the density verification method, the Engineer will conduct nuclear density gauge tests. The Engineer will follow the density testing procedure detailed in the document "Illinois Modified ASTM D 2950, Standard Test Method for Density of Bituminous Concrete In-Place by Nuclear Method".

A density verification test will be the result of a single core or the average of the nuclear density tests at one location. The results of each density test must be within acceptable limits. The Engineer will promptly notify the Contractor of observed deficiencies."

Revise the seventh paragraph and all subsequent paragraphs in Section D. of the document "Hot-Mix Asphalt QC/QA Initial Daily Plant and Random Samples" to read:

"Mixtures shall be sampled from the truck at the plant by the Contractor following the same procedure used to collect QC mixture samples (Section A). This process will be witnessed by the Engineer who will take custody of the verification sample. Each sample bag with a verification mixture sample will be secured by the Engineer using a locking ID tag. Sample boxes containing the verification mixture sample will be sealed/taped by the Engineer using a security ID label."



Route	Marked Route	Section Number
FAP Route 0348	IL Route 43 (Waukegan Road)	22-00206-00-CH
Project Number	County	Contract Number
SYQD(014)	Cook	61K82

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

 2-28-2025

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 Route 43 (Waukegan Road) and East Lake Avenue in the Village of Glenview, Cook County, Illinois. Geographically, the project is in Sections 26 and 35, Townships 42N, Range 12 East. The GPS coordinates of the center of the project area are 42.0800 N and 87.7983 W.

2. Describe the nature of the construction activity or demolition work.

The work consists of earth excavation, pavement removal, construction of storm sewers, HMA binder and surface course, combination concrete curb and gutter, street lighting, traffic signals, tree removal, landscaping, erosion control, pavement markings, sodding, and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

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).

Stage 1 - Removal and replacement of curb and gutter, pavement, driveway, sidewalk, and storm sewer system within the stage limits.

Stage 2 - Removal and replacement of curb and gutter, pavement, driveway, sidewalk, and storm sewer system within the stage limits.

Stage 3 - Removal and replacement of curb and gutter, pavement, driveway, sidewalk, and storm sewer system within the stage limits.

4. The total area of the construction site is estimated to be 7.01 acres.

5. The total area of the site estimated to be disturbed by excavation, grading or other activities is 1.52 acres.

6. Determine an estimate of the runoff coefficient of the site after construction activities are completed.

0.79

7. Provide the existing information describing the potential erosivity of the soil at discharge locations at the project site.

The project site discharges into existing storm sewers.

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.

23A Blount silt loam, Lake Michigan Lobe, 0 to 2 percent slopes, T factor = 3

533 Urban Land, T-factor = 0

2822B Anthroportic Udothents-Urban land-Elliott complex, 2 to 4 percent slopes, T-factor = 5

10. List of all MS4 permittees in the area of this project

Cook County, Illinois Department of Transportation

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.

Receiving waters - West Fork, North Branch of the Chicago River

2. Are wetlands present in the project area? ☐ Yes ☒ No

If yes, describe the areal extent of the wetland acreage at the site.

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: _____

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.

☒ Fertilizer (check as appropriate)

☒ Nitrogen

☒ Phosphorus, and/or

☒ Potassium

☐ Herbicide

☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)

☒ Waste water for concrete washout station

☐ Coal tar Pitch Emulsion

☐ Other (Specify) _____

☐ 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)
West Fork of the North Branch of the Chicago River	Aldrin, DDT, Endrin, Hexachlorobenzene, Phosphorus (Total), and Total Suspended Solids

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

Inlet filters will be installed in all open lid structures. Silt fence will be installed at locations where disturbed soil drains away from the roadway.

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

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

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

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):

- | | |
|---|--|
| ☐ Mulch | ☐ Preservation of existing vegetation |
| ☒ Erosion Control Blanket | ☐ Temporary Turf Cover Mixture (Class 7) |
| ☐ Turf Reinforcement Mat | ☐ Permanent seeding (Class 1-6) |
| ☒ Sodding | ☒ Other (Specify) <u>Temporary Erosion Control Seeding</u> |
| ☐ Geotextile fabric | ☐ Other (Specify) _____ |
| | ☐ Other (Specify) _____ |

2. Sediment Control:

The following sediment control devices will be implemented on this project:

- | | |
|--|---|
| ☐ Ditch Checks | ☒ Perimeter Erosion Barrier |
| ☐ Inlet and Pipe protection | ☐ Rolled Excelsior |
| ☐ Hay or Straw bales | ☐ 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:

- | | |
|--|--|
| ☐ Aggregate Ditch | ☐ Stabilized Construction Exits |
| ☐ Articulated Block Revetment Mat | ☐ Stabilized Trench Flow |
| ☐ Barrier (Permanent) | ☐ Sediment Basin |
| ☐ Concrete Revetment Mats | ☐ Retaining Walls |
| ☐ Dewatering Filtering | ☐ Riprap |
| ☐ Gabions | ☐ Storm Drain Inlet Protection |
| ☐ In-Stream or Wetland Work | ☐ Slope Walls |
| ☐ Level Spreaders | ☐ Sediment Trap |
| ☐ Paved Ditch | ☐ Other (Specify) _____ |
| ☐ Permanent Check Dams | ☐ Other (Specify) _____ |
| ☐ Precast Block Revetment Mat | ☐ Other (Specify) _____ |
| ☐ Rock Outlet Protection | ☐ 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.

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

The slopes of the pipes have been designed to reduce the velocity of the water as much as possible without causing siltation within the pipes. Due to limited right-of-way, a majority of the drainage on the project is conveyed through storm sewer pipes. For water quality measures, catch basins shall be used where practical.

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)

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

--

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 Blanket - The Contractor shall repair damage due to water running beneath the blanket and restore blanket when displacement occurs. Displaced ECB shall be replaced and restapled.

Sodding - The Contractor shall limit foot traffic to low use for the first two to three weeks. The Contractor shall replace when greater than 25% of any individual piece of sod is no longer viable. The Contractor shall restore areas where rolling edges are present or sod is displaced.

Temporary Erosion Control Seeding - The Contractor shall reapply seed if stabilization has not been achieved.

Perimeter Erosion Barrier - The Contractor shall repair tears, gaps or undermining and shall restore leaning PEB and ensure taut. The Contractor shall repair or replace any missing or broken stakes immediately. The Contractor shall clean PEB if sediment reaches one-third height of the barrier.

Inlet Filters - The Contractor shall remove sediment from inlet filter baskets when the basket is 25% full or 50% of the fabric pores are covered in silt. The Contractor shall clean the inlet filter if standing water is present longer than one after a rain event. The Contractor shall remove trash accumulated around or on top of the inlet filter. When the filter is removed for cleaning, the Contractor shall replace the filter if any tear is present.

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

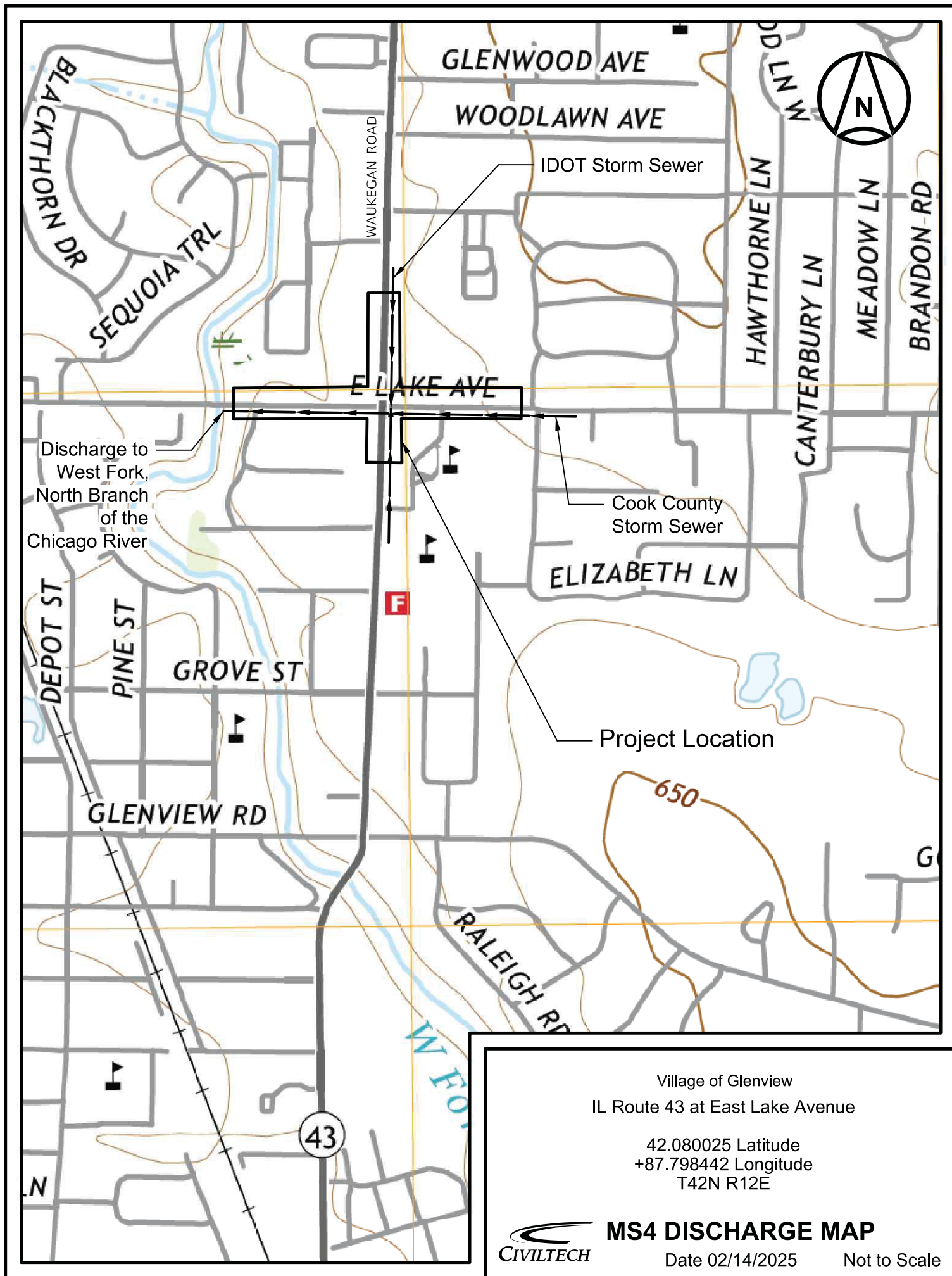
In addition to the NOI submitted to IEPA, all MS4 permittees identified in Part I. Site Description shall receive a copy of the NOI.

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.



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 Route 0348	IL Route 43 (Waukegan Road)	22-00206-00-CH
Project Number	County	Contract Number
SYQD(014)	Cook	61K82

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



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Water Pollution Control Notice of Intent (NOI) for General Permit to Discharge Storm Water Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

For Office Use Only

OWNER INFORMATION

Permit No. ILR10 _____

Company/Owner Name: Village of Glenview

Mailing Address: 2500 East Lake Avenue

Phone: 847-904-4400

City: Glenview State: IL Zip: 60026

Fax: _____

Contact Person: _____ E-mail: _____

Owner Type (select one) City

CONTRACTOR INFORMATION

MS4 Community: ☒ Yes ☐ No

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: _____ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Select One: ☒ New ☐ Change of information for: ILR10 _____

Project Name: Roadway Improvements - Waukegan Road and East Lake Ave County: Cook

Street Address: _____ City: Glenview IL Zip: 60026

Latitude: 42 04 48 Longitude: 87 47 54 26,35 42N 12E
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Approximate Construction Start Date Sep 1, 2024 Approximate Construction End Date Oct 31, 2025

Total size of construction site in acres: 7.01

If less than 1 acre, is the site part of a larger common plan of development?

☐ Yes ☐ No

Fee Schedule for Construction Sites:
Less than 5 acres - \$250
5 or more acres - \$750

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Has the SWPPP been submitted to the Agency?

☐ Yes ☒ No

(Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov)

Location of SWPPP for viewing: Address: _____ City: _____

SWPPP contact information: _____ Inspector qualifications: _____

Contact Name: _____

Phone: _____ Fax: _____ E-mail: _____

Project inspector, if different from above _____ Inspector qualifications: _____

Inspector's Name: _____

Phone: _____ Fax: _____ E-mail: _____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

TYPE OF CONSTRUCTION (select one)Construction Type Transportation

SIC Code: _____

Type a detailed description of the project:

The work consists of earth excavation, pavement removal, construction of storm sewers, HMA binder and surface course, combination concrete curb and gutter, street lighting, traffic signals, storm sewer, tree removal, landscaping, erosion control, pavement markings, sodding, and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on:

Historic Preservation Agency ☒ Yes ☐ NoEndangered Species ☒ Yes ☐ No**RECEIVING WATER INFORMATION**Does your storm water discharge directly to: ☐ Waters of the State or ☒ Storm SewerOwner of storm sewer system: Cook County and Illinois Department of TransportationName of closest receiving water body to which you discharge: West Fork, North Branch Chicago River

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this 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. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature:_____
Date:_____
Printed Name:_____
Title:

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the upper right hand corner of the first page.

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610

FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."

Submission of initial fee and an electronic submission of Storm Water Pollution Prevention Plan (SWPPP) for Initial Permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA at the above address.

Construction sites with less than 5 acres of land disturbance - fee is \$250.

Construction sites with 5 or more acres of land disturbance - fee is \$750.

SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov. When submitting electronically, use Project Name and City as indicated on NOI form.



Illinois Environmental Protection Agency

Page 1 of 2

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control

Construction Site Storm Water Discharge Incidence of Non-Compliance (ION)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. You may email this completed form to:

epa.swnoncomp@illinois.gov

For Office Use Only

Permit No. ILR10

Permittee Information:

Name: Village of Glenview
Street Address: 2500 East Lake Avenue P.O. Box: _____
City: Glenview State: IL Zip Code: 60026 County: Cook
Phone: 847-904-4400 Email: _____

Construction Site Information:

Site Name: Waukegan Road and East Lake Avenue
Street Address: Intersection of Waukegan Road and East Lake Avenue
City: Glenview State: IL Zip Code: 60026
Latitude: 42 04 48 Longitude: 87 47 54 26,35 42N 12E
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Cause of Non-Compliance

Actions Taken to Prevent Any Further Non-Compliance

Environmental Impact Resulting From the Non-Compliance

Actions Taken to Reduce the Environmental Impact Resulting From the Non-Compliance

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature: _____

Date: _____

Printed Name: _____

Title: _____

IL 532 2105 WPC
624 Rev. 10/2011

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

**DIVISION OF WATER POLLUTION CONTROL
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
FIELD OPERATIONS SECTION**

GUIDELINES FOR COMPLETION OF INCIDENCE OF NON-COMPLIANCE (ION) FORM

Complete and submit this form for any violation of the Storm Water Pollution Prevention Plan observed during any inspection conducted, including those not required by the SWPPP. Please adhere to the following guidelines:

Initial submission within 24 hours by email, telephone or fax (see region fax numbers) of any incidence of non-compliance for any violation. Submit email copy to: epa.swnoncomp@illinois.gov. After 24 hours notification, submit signed original ION within 5 days to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance #19
Post Office Box 19276
Springfield, Illinois 62794-9276

FIELD OPERATIONS HEADQUARTERS
Bruce Yurdin, Manager
Phone: 217/782-3362 Fax: 217/785-1225
EMAIL: epa.swnoncomp@illinois.gov

Region 1 - ROCKFORD
Chuck Corley, Manager
Phone: 815/987-7760 Fax: 815/987-7005

Region 2 - DESPLAINES
Jay Patel, Manager
Phone: 847/294-4000 Fax: 847/294-4058

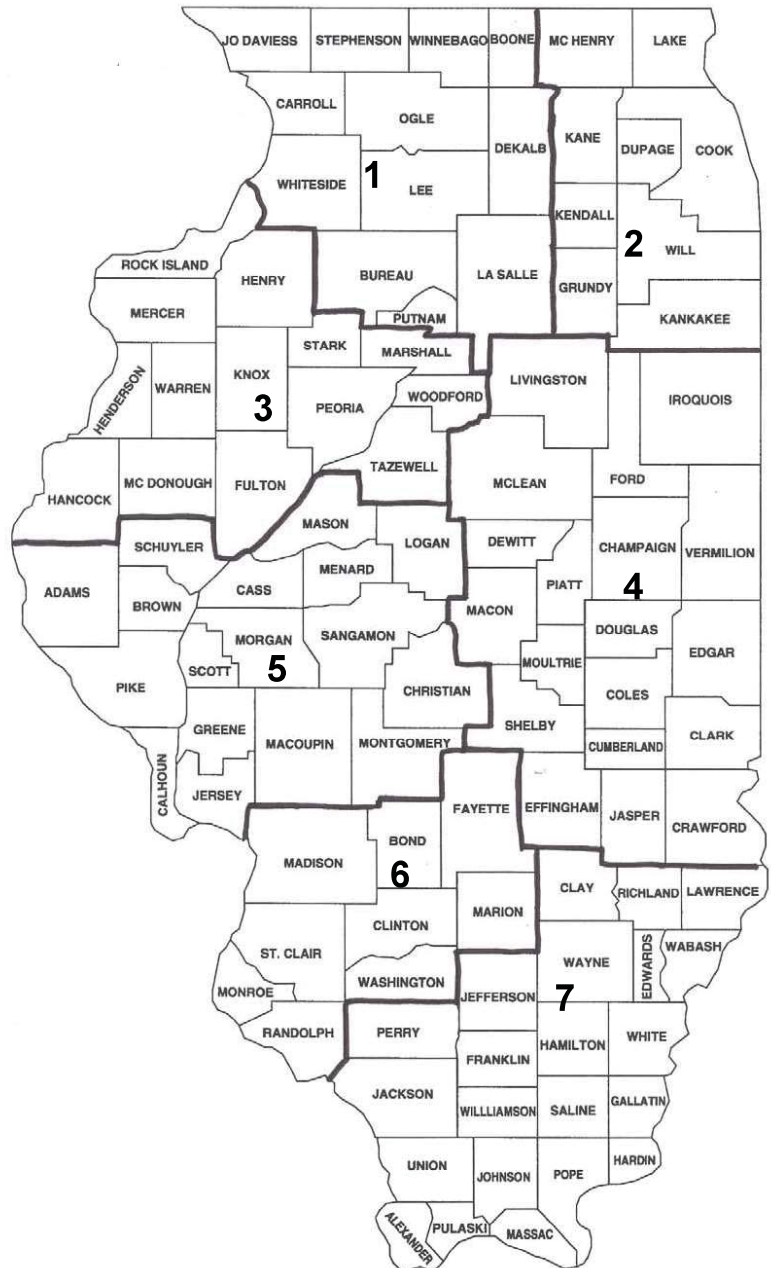
Region 3 - PEORIA
Jim Kammueler, Manager
Phone: 309/693-5463 Fax: 309/693-5467

Region 4 - CHAMPAIGN
Joe Koronkowski, Manager
Phone: 217/278-5800 Fax: 217/278-5808

Region 5 - SPRINGFIELD
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 6 - COLLINSVILLE
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 7- MARION
Byron Marks, Manager
Phone: 618/993-7200 Fax: 618/997-5467





Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control NOTICE OF TERMINATION (NOT) of Coverage under the General Permit for Storm Water Discharges Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

OWNER INFORMATION

Permit No. ILR10 _____

Owner Name: Village of Glenview

Owner Type (select one) City

Mailing Address: 2500 East Lake Avenue

Phone: 847-904-4400

City: Glenview State: IL Zip: 60026 Fax: _____

Contact Person: _____ E-mail: _____

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: _____ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Facility Name: Waukegan Road and East Lake Avenue

Street Address: Intersection of Waukegan Road and East Lake Avenue

City: Glenview IL Zip: 60026 County: Cook

NPDES Storm Water General Permit Number: ILR10 _____

Latitude: 42 04 48 Longitude: 87 47 54 26,35 42N 12E
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

DATE PROJECT HAS BEEN COMPLETED AND STABILIZED: _____

NOTE: Coverage under this permit cannot be terminated without the completion date.

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized or that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to Waters of the State is unlawful under the Environmental Protection Act and the Clean Water Act where the discharge is not authorized by an NPDES Permit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature: _____

Date: _____

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control, Attn: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

(Do not submit additional documentation unless requested)

GUIDELINES FOR COMPLETION OF NOTICE OF TERMINATION (NOT) FORM

Please adhere to the following guidelines:

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible.

Submit completed forms to:

Illinois Environmental Protection Agency
Division of Water Pollution Control, Attn: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

Final stabilization has occurred when:

- (a) all soil disturbing activities at the site have been completed;
- (b) a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas not covered by permanent structures; or
- (c) equivalent permanent stabilization measures have been employed.

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET

CHICAGO, ILLINOIS 60611-3154

312.751.5600

BOARD OF COMMISSIONERS

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March 24, 2026

Thomas K. Liliensiek, P.E.
Civiltech Engineering, Inc.
30 North LaSalle Street, Suite 3220
Chicago, IL 60602
tliliensiek@civiltechinc.com

Dear Mr. Liliensiek:

Subject: MWRD Watershed Management Permit No. 2024-0053
Date of Issuance – April 16, 2024
Project Location – Intersection of IL Route 43 and East Lake Avenue
Glenview, IL

This is in response to your letter, dated March 18, 2026, requesting a time extension for the subject permit.

A time extension is approved to April 16, 2027, to start construction under the subject permit. In order to proceed with construction under the current permit, construction must start by April 16, 2027 and continuously progress. A new WMO permit will be required if construction does not start by April 16, 2027, and the WMO requirements in effect at the time the new application is accepted by the District will apply.

If you have any questions, please email Constance Mihalache at MihalacheC@mwr.org.

Sincerely,

for Adam Witek, P.E.
Principal Civil Engineer

CM

cc: Adriana Webb, Village of Glenview, awebb@glenview.il.us
Timothy Horn, Village of Glenview, thorn@glenview.il.us
Suhail Patel, MWRD

PA #15



WATERSHED MANAGEMENT PERMIT

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

LOCAL SEWER SYSTEMS SECTION
111 EAST ERIE STREET, CHICAGO, IL 60611
www.mwrd.org/wmo

INSTRUCTIONS FOR COMPLETING PERMIT FORM

Submit a signed copy of the Watershed Management Permit application electronically through the Watershed Management Ordinance Permit Application Submittal System (WPASS) at www.mwrd.org/wpPASS. Include any other applicable permit schedules with the application and check the appropriate boxes. Submit a signed and sealed copy of the plan set. If applicable, submit the Fee Payment Voucher and Payment Receipt. Payments can be mailed to the address at the top of this form or submitted electronically at <https://mwrd.org/form/lsss-payment>. For any questions or assistance with submitting the permit application please email us at wpass@mwrd.org or call (312) 751-3255.

NAME AND LOCATION OF PROJECT

Name of Project (as shown on the plan set): FAU Route 0348 (IL Route 43 - Waukegan Road)

Location of Project (address or with respect to two major streets): Intersection of IL Route 43 (Waukegan Road) and East Lake Avenue

Municipality (Township, if unincorporated): Village of Glenview

PIN (include all impacted, use additional sheet if necessary): N/A - ROW

SEWER AREA OF PROJECT

☐ Combined Sewer Area ☒ Separate Sewer Area

APPLICABLE PERMIT SCHEDULES

☒ Project Information (Required for all projects)	WMO Schedule A	(Page 5 of 9)
☒ Sewer Summary (Required for all projects)	WMO Schedule B	(Page 6 of 9)
☒ Sewer Connections (Required for all projects)	WMO Schedule C	(Page 7 of 9)
☐ Detention & Stormwater Management Facilities (WMO)	WMO Schedule D	(2 Pages)
☐ Detention & Stormwater Management Facilities (Legacy)	WMO Schedule D-Legacy	(4 Pages)
☐ Public Lift Station and/or Force Main	WMO Schedule E	(2 Pages)
☐ Characteristics of Waste Discharge	WMO Schedule F	(2 Pages)
☐ Treatment or Pretreatment Facilities	WMO Schedule G	(2 Pages)
☐ Hazard Areas (Floodplain / Floodway /Riparian Areas)	WMO Schedule H	(2 Pages)
☐ Affidavit Relative to Compliance with Article 7	WMO Schedule J	(1 Page)
☐ Affidavit of Disclosure of Property Interest	WMO Schedule K	(2 Pages)
☐ Notice of Requirements for Storm Water Detention	WMO Schedule L	(2 Pages)
☐ Outfall, Direct Connection, District Owned or Leased Property	WMO Schedule O	(1 Page)
☒ Soil Erosion and Sediment Control	WMO Schedule P	(1 Page)
☐ Recording and Maintenance	WMO Schedule R	(2 Pages)
☐ Wetlands and Wetland Buffer Areas	WMO Schedule W	(2 Pages)
☐ Current Survey of Property Interests (Required for most projects)	Exhibit A	

DISTRICT or AUTHORIZED MUNICIPALITY USE ONLY

Application Received: 02/13/2024 Permit Issued: 4/16/2024

PERMIT ISSUED BY: ☒ DISTRICT ☐ Authorized Municipality

WMO PERMIT

GENERAL CONDITIONS

2024-0053

WMO Permit Number: _____

1. **Definitions.** The definitions of Appendix A of the Watershed Management Ordinance are incorporated into this Watershed Management Permit by reference. Additionally, the following words and phrases shall be defined as follows:

- a) **Building and Occupancy Permit.** Building and Occupancy Permit issued by the Municipality.
- b) **Design Engineer.** A Professional Engineer who prepares plans and specifications for the project, and signs the Watershed Management Permit Application.
- c) **Inspection Engineer.** A Professional Engineer who inspects the development to ensure compliance with the design plans, specifications, a Watershed Management Permit, and the Watershed Management Ordinance.
- d) **Permit.** Watershed Management Permit.
- e) **General Conditions.** General Conditions contained in a Watershed Management Permit.
- f) **Special Conditions.** Special Conditions of this Watershed Management Permit.

2. **Adequacy of Design.** The schedules, plans, specifications and all other data and documents submitted for this Permit are made a part hereof. The Permit shall not relieve the Design Engineer of the sole responsibility for the adequacy of the design. The issuance of this Permit shall not be construed as approval of the concept or construction details of the proposed facilities and shall not absolve the Permittee, Co-Permittee or Design Engineer of their respective responsibilities.

3. **Joint Construction and Operation Permits.** Unless otherwise stated by the Special Conditions, the issuance of this Permit shall be a joint construction and operation permit, provided that the Permittee or Co-Permittee has complied with all General and Special Conditions.

4. **Allowable Discharges.** Discharges into the Sanitary Sewer system constructed under this Permit shall consist of sanitary Sewage only. Unless otherwise stated by the Special Conditions, there shall be no discharge of industrial wastes under this Permit. Stormwater shall not be permitted to enter the Sanitary Sewer system. Without limiting the general prohibition of the previous sentence, roof and footing drains shall not be connected to the Sanitary Sewer system.

5. **Construction Inspection.** All erosion and sediment control facilities, Stormwater Facilities, Detention Facilities, and Qualified Sewer Construction shall be inspected and approved by an Inspection Engineer acting on behalf of the Permittee or the Owner of the

project, or by a duly authorized and competent representative of the Inspection Engineer. No sewer trenches shall be backfilled except as authorized by the Inspection Engineer after having inspected and approved the sewer installation.

6. **Maintenance.** Stormwater Facilities, Detention Facilities, Qualified Sewer Construction, Sanitary Sewer lines, Combined Sewer lines, systems or facilities constructed hereunder or serving the facilities constructed hereunder shall be properly maintained and operated at all times in accordance with all applicable requirements. It is understood that the responsibility for maintenance shall run as a joint and several obligation against the Permittee, the Co-Permittee, the property served, the Owner and the operator of the facilities, and said responsibility shall not be discharged nor in any way affected by change of ownership of said property, unless the District has authorized assignment of the permit.

7. **Indemnification.** The Permittee shall be solely responsible for and shall defend, indemnify and hold harmless the Metropolitan Water Reclamation District of Greater Chicago ("District", "MWRD", or "MWRDGC") and its Commissioners, officers, employees, servants, and agents from liabilities of every kind, including losses, damages and reasonable costs, payments and expenses (such as, but not limited to, court costs and reasonable attorneys' fees and disbursements), claims, demands, actions, suits, proceedings, judgments or settlements, any or all of which are asserted by any individual, private entity, or public entity against the District and its Commissioners, officers, employees, servants, or agents and arise out of or are in any way related to the issuance of this Permit. Without limiting the generality of the preceding sentence, the provisions of this paragraph shall extend to indemnify and hold harmless the District and its Commissioners, officers, employees, servants, and agents from any claims or damages arising out of or in connection with the termination or revocation of this Permit.

The Permittee shall be solely responsible for and shall defend, indemnify and hold harmless an Authorized Municipality and its elected officials, officers, employees, servants, and agents from liabilities of every kind, including losses, damages and reasonable costs, payments and expenses (such as, but not limited to, court costs and reasonable attorneys' fees and disbursements), claims, demands, actions, suits, proceedings, judgments or settlements, any or all of which are asserted by any individual, private entity, or public entity against the Authorized Municipality and its elected officials, officers, employees, servants, or agents and arise out of or are in any way related to the issuance of this Permit. Without limiting the generality

WMO PERMIT

GENERAL CONDITIONS

WMO Permit Number: **2024-0053**

of the preceding sentence, the provisions of this paragraph shall extend to indemnify and hold harmless the Authorized Municipality and its elected officials, officers, employees, servants, and agents from any claims or damages arising out of or in connection with the termination or revocation of this Permit.

8. **Sewer Construction by District.** Permittee understands and acknowledges that the District has the right and power to construct and extend sewer service facilities and render such services within the area to be served by the project for which this Permit is issued, and that by the District constructing and extending such sewer service facilities and rendering such services, the facilities constructed by the Permittee under this Permit may decrease in value, become useless or of no value whatsoever, the Permittee may also sustain a loss of business, income and profits.

Therefore, by accepting this Permit and acting thereon, the Permittee, for itself, its successors and assigns, does remise, release and forever discharge the District and its Commissioners, officers, employees, servants, and agents of any and all claims whatsoever which Permittee may now have or hereafter acquire and which Permittee's successors and assigns hereafter can, shall, or may have against the District and its Commissioners, officers, employees, servants, and agents for all losses and damages, either direct or indirect, claimed to have been incurred by reason of the construction or extension at any time hereafter by the District of sewer service facilities in the service area contemplated by this Permit, the rendering of such services, which District facilities and services decrease the value of the facilities constructed by the Permittee under this Permit, make same useless or of no value whatsoever, including but not limited to, any and all damages arising under 70 ILCS 2605/19; the taking of private property for public use without due compensation; the interference with the contracts of Permittee; the interference with Permittee's use and enjoyment of its land; and the decrease in value of Permittee's land.

9. **Third Parties.** Regarding Qualified Sewer Construction, this Permit does not grant the right or authority to the Permittee: (a) to construct or encroach upon any lands of the District or of any other parties, (b) to construct outside of the territorial boundaries of the District except as allowed under an extraterritorial service agreement, (c) to construct or encroach upon the territorial boundaries of any units of local government within the District, (d) to connect to or discharge into or be served by (directly or indirectly) any sewer or sewer system owned or operated by third parties.

10. **Costs.** It is expressly stipulated and clearly understood that the Stormwater Facilities, Detention Facilities, Qualified Sewer Construction, or facilities for which the Permit is issued shall be constructed, operated and maintained at no cost to the District.
11. **Other Sewer Construction.** The District reserves the right, privilege and authority to permit others to reconstruct, change, alter and replace all sewers and appurtenances thereto at the point of connection of any sewerage system to a District interceptor and/or in public right-of-ways of District easements, and to introduce additional Sewage flow through this connection into the intercepting sewer of said District.
12. **Change of Use.** This Permit shall be incorporated in the Building and Occupancy Permit for the Building or Buildings served under this Permit. The Owner or occupant of any Building served under this Permit shall not cause, or permit, a change of use of the Building to a use other than that indicated in this Permit without first having obtained a written permission from the Executive Director of the District.
13. **Interceptors Overloading.** The District hereby serves notice that its interceptors may flow full and may surcharge, and flooding of the proposed system may occur. The Permittee agrees that the proposed systems shall be constructed, operated and maintained at the sole risk of the Permittee.
14. **Transferability.** This Permit may not be assigned or transferred without the written consent of the Executive Director of the District or Enforcement Officer of an Authorized Municipality. However, a Sole Permittee may be required to assign or transfer the Permit when divesting itself of ownership to a third-party and should notify the District prior to such divestment so that the District may determine whether assignment to the new owner is necessary.
15. **Termination.** The District has the right to enforce or revoke a Permit issued by either the District or an Authorized Municipality as outlined in Article 12 of the Watershed Management Ordinance.

It is understood and agreed that in the event the Permittee shall default on or fail to perform and carryout any of the covenants, conditions or provisions of this Permit and such default or violation shall continue for sixty (60) days after receipt of notice thereof in writing given by the Executive Director of the District, then it shall be lawful for the District at or after the expiration of said sixty (60) days to declare said Permit terminated. The Permittee agrees that immediately upon receipt of written notice of such termination it will stop all operations, discontinue any discharges and disconnect the sewerage system or facilities constructed under this Permit. If the

WMO PERMIT

GENERAL CONDITIONS

2024-0053

WMO Permit Number: _____

Permittee fails to do so, the District shall have the right to disconnect said system. The Permittee hereby agrees to pay for any costs incurred by the District for said disconnection.

16. **Rights and Remedies.** The various rights and remedies of the District contained in this Permit shall be construed as cumulative, and no one of them shall be construed as exclusive of any one or more of the others or exclusive of any other rights or remedies allowed by applicable rules, regulations, ordinances and laws. An election by the District to enforce any one or more of its rights or remedies shall not be construed as a waiver of the rights of the District to pursue any other rights or remedies provided under the terms and provisions of this Permit or under any applicable rules, regulations, ordinances or laws.
17. **Expiration.** This Permit shall expire if construction has not started within one (1) year from the date of issue. Construction under an expired Permit is deemed construction without a Permit. All construction under this Permit shall be completed within three (3) years after the date of permit issuance. If conditions so warrant, an extension may be granted. For publicly financed projects (e.g. special assessments) the one (1) year period indicated will be considered from the date of final court action.
18. **Revocation.** In issuing this Permit, the District or Authorized Municipality has relied upon the statements and representations made by the Permittee or his agent. Any incorrect statements or representations shall be cause for revocation of this Permit, and all the rights of the Permittee hereunder shall immediately become null and void.
19. **Advance Notice.** The Permittee shall give the District or Authorized Municipality advance notice of at least two working days prior to the following: mobilization and installation of Erosion and Sediment Control Practices; commencement of construction; excavation for Qualified Sewer Construction; Major Stormwater Systems and Detention Facilities under this Permit; and completion of construction. When advance notice is given, the Permittee shall provide the Permit number, municipality and location.
20. **Compliance with Plans and Specifications.** All construction shall be in accordance with the plans and specifications submitted for this Permit and made a part hereof. No changes in, or deviation from the plans and specifications which affect capacity, maintenance, design requirements, service area or Permit requirements shall be permitted unless revised plans have been submitted to, and approved by the District or Authorized Municipality. The Permit together with a set of the plans and specifications (revised plans and specifications, if any) shall be kept on the jobsite at all times during construction and until final inspection and approval by the District or Authorized Municipality.
21. **Testing and Approval.** All construction under this Permit shall be subject to inspection, testing and approval by the District. All testing shall be made, or caused to be made, by the Permittee at no cost to the District and in the presence of the District representative. Upon satisfactory completion of construction, the Permittee and the owner shall submit, or cause to be submitted, a completion certificate and request for approval on the form prescribed by the District. No sewer or other facilities shall be put in service until all the conditions of the Permit have been satisfactorily met.
22. **Record Drawings.** Before final inspection and approval by the District or an Authorized Municipality, the Permittee shall furnish, or cause to be furnished to the District or an Authorized Municipality, a set of Record drawings and Schedule R for the site stormwater plan, Detention Facilities, Stormwater Facilities, and Qualified Sewer Construction.
23. **Compliance with Rules and Regulations.** The Permittee hereby expressly assumes all responsibilities for meeting the requirements of all applicable rules, regulations, ordinances and laws of Local, State and Federal authorities. Issuance of this Permit shall not constitute a waiver of any applicable requirements.
24. **Severability.** The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit, is held invalid, the remaining provisions of this Permit shall continue in full force and effect.
25. **Property Rights.** This Permit does not convey any property rights of any sort, or any exclusive privilege.
26. **Conflict with Other Conditions.** In the case of conflict between these General Conditions and any other condition(s) in this permit, the other condition(s) shall govern.

WMO SCHEDULE A PROJECT INFORMATION

Watershed Management Permit No.

2024-0053

1. **NAME OF PROJECT** FAU Route 0348 (IL Route 43 - Waukegan Road)

(as shown on the plans)

2. **APPURTENANCES** (check all applicable items)

☐ Siphon

☐ Drop Manholes

☐ Public Lift Station

☐ Outfalls

(Submit Sch. E)

(Submit Sch. O)

☐ Stream Crossing ☐ Direct Connections to District → Describe

3. **RECEIVING SANITARY/COMBINED SEWER SYSTEM**

A. System that project will connect to is:

☒ Existing

☐ Proposed /Under Construction → District Permit #

List owners of all sewers from project to District interceptor Village of Glenview Sanitary Sewer.

N, S, and W leg sanitary sewers drain to 76.5" MWRD Golf Glenview No. 2 1966. East leg sanitary sewer drains to 4'6" x 5'0" Harms Road Sewer 1946.

4. **RECEIVING STORM SEWER SYSTEM TRIBUTARY TO WATERWAY**

A. System that project will connect to is:

☒ Existing

☐ Proposed /Under Construction → District Permit #

List owners of all sewers from project to waterway Village of Glenview, Cook County, IDOT

5. **EXISTING LIFT STATION**

☒ No ☐ Yes → Receiving system includes existing lift station

If yes, indicate location

6. **FLOOD PROTECTION AREAS**

Does any part of the project area involve the following? (check all applicable items)

☐ Floodplain/Floodway/Riparian
(Schedule H)

☐ Wetlands/Buffers/Riparian
(Schedule W)

7. **SIZE OF PROJECT**

A. Total contiguous ownership interest N/A - ROW acres

B. Development Area 1.15 acres

Impervious area within project

C. Before development 0.39 acres

D. After development 0.71 acres

8. **STORMWATER MANAGEMENT**

A. Is project in the service area of a District permitted detention facility?

☒ No

☐ Yes

→ District Permit No.

B. Is stormwater management provided under this permit?

☐ No

☒ Yes

→ Required by: ☐ District

(Submit Sch. D)

☒ Other

C. Type of stormwater management

☐ Runoff Control

☐ Volume Control

☒ Detention Storage

Per IDOT Requirements

WMO SCHEDULE B

SEWER SUMMARY

Watershed Management Permit No.

2024-0053

PROJECT NAME: FAU Route 0348 (IL Route 43 - Waukegan Road)

(as shown on the plans)

1. **SEWER SUMMARY:** Include all qualified sewer construction sewers (Sanitary sewers in combined and separate sewer areas and Storm sewers in combined sewer area) and their tributary type:
Sanitary (San), Combined (C), Storm to Combined (SC), Storm to Waterway (SW), or Storm part of Volume Control (SVC)

Tributary Type	Choose an Choose one	Choose an Choose one	Choose an Choose one	Choose an Choose one	Choose Choose one	Choose an Choose one	Choose Choose one
Pipe Size (in.)							
Total Length (ft.)							
Min. slope used (%)							
Pipe Material *							
Total Manholes							
Total Cleanouts							
Catch Basin/Inlets							

* Pipe material and joint specifications must be shown on plans. See Technical Guidance Manual for acceptable specifications.

Sewer construction in floodplain: ☒ No ☐ Yes → FPE _____ ft.

Sanitary Manholes in floodplain _____

Note: All structures shall have lids located above the FPE or be constructed with watertight, bolt down covers/lids.

2. NATURE OF PROJECT (Check all that apply)

Brief description Roadway widening and resurfacing

- ☒ Publicly financed ☐ Sewer extension to serve future development
☐ Sewer system serving a subdivision ☐ Storm sewers in combined sewer area
☐ Off-site trunk sewer to serve subdivision ☐ Service connections to serve buildings (Sch. C)
☐ Other _____

3. SEWER EXTENSIONS

Identify proposed project designed to service future connections (not included in Schedule C). Check the appropriate box and submit service area map and estimate of population equivalent (PE) to be served.

- ☒ NO ☐ YES → ☐ Service area map
☐ P.E. estimate submitted

WMO SCHEDULE C SEWER CONNECTIONS

Watershed Management Permit No.

2024-0053

(FILL OUT ALL SECTIONS THAT APPLY)

1. BUILDING CONNECTION DATA

A. RESIDENTIAL BUILDINGS

☐ Single Family	Total dwelling units *	_____	
	Number of sewer connections *	_____	PE ** _____
☐ Multi Family	Total dwelling units *	_____	
	Number of sewer connections *	_____	PE ** _____

B. COMMERCIAL& RECREATIONAL BUILDINGS

☐ Number of sewer connections	_____	PE ** _____
--	-------	-------------

C. INDUSTRIAL BUILDINGS

☐ Number of sewer connections	_____	PE ** _____
--	-------	-------------

* Each sanitary line exiting a building is a connection

** Population Equivalent (Submit calculations for each connection and total from all connections)

2. BUILDING USE - (Check all that apply)

A. COMMERCIAL & RECREATIONAL

Describe use of buildings, including principal product(s) or activities _____

☐ Food preparation or processing (install grease separator)	☐ Laundromat (install lint basin)
☐ Swimming pool (provide pool plans)	☐ Auto service (install triple basin)
☐ Manufacturing (describe) _____	☐ Auto wash (install mud basin)
☐ Other _____	

B. INDUSTRIAL BUILDINGS

Describe use of buildings, including principal product(s) or activities _____

☐ Sewer connections will receive domestic sewage only
☐ Industrial waste is produced

NOTE: If industrial waste is produced, submit [WMO Schedule F](#) & [WMO Schedule G](#) and plumbing plans along with flow diagram for pretreatment system.

SCHEDULE P

SOIL EROSION AND SEDIMENT CONTROL

WMO Permit Number: **2024-0053**

NAME OF PROJECT: FAU Route 0348 (IL Route 43 - Waukegan Road)

1. PROJECT INFORMATION:

- A. Project Area (include all disturbed area) 7.01 acres
- B. Stormwater discharges directly to:
- ☒ Storm Sewer
 - ☐ Combined Sewer
 - ☐ Overland Flow Route
 - ☐ Waters of the State → Name of water body: _____
 - ☐ Other → Explain: _____
- C. Indicate if any of the following special circumstances apply (check all that apply):
- ☐ Volume Control Facility ☐ Wetland / Buffer ☐ Outfall to Waterway
 - ☐ Floodplain / Floodway ☐ Riparian Environment ☐ Tributary to Lake Michigan
- D. Explain how special circumstances indicated in Item 1.C will be protected from erosion and sedimentation:
- _____
- _____

2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES: Submit a soil erosion and sediment control plan indicating type, location, and detail for all practices. Include a sequence for all major construction activities. All practices must be constructed in accordance with the Illinois Urban Manual.

- A. Indicate all temporary soil erosion and sediment control practices installed as part of the project:
- ☐ Entrance / Exit Control ☒ Vegetative Control ☐ Filtration for Dewatering
 - ☒ Concrete Washout ☐ Matting / Mulching ☐ Conveyance Channel
 - ☒ Silt Fence ☐ Coir Roll ☐ Velocity Dissipation
 - ☐ Double-Row Silt Fence ☐ Sediment Trap ☐ Cofferdam / Silt Curtain
 - ☒ Inlet Control ☐ Sediment Basin
 - ☐ Other: _____
 - ☐ Other: _____
- B. Indicate all permanent soil erosion control practices installed as part of the project:
- ☒ Vegetative Control ☐ Velocity Dissipation
 - ☐ Other: _____
 - ☐ Other: _____

SPECIAL CONDITIONS FOR PERMIT NO 2024-0053

1. Construction must conform to the soil erosion and sediment control requirements of this permit and any other local, state, and/or federal agencies.
2. This permit is issued contingent upon approval from the Illinois Department of Transportation (IDOT).
3. The stormwater detention outlet control structure shown on the plans is provided in accordance with IDOT requirements.
4. The MWRD shall have 24 hour-a-day unrestricted access to all MWRD structures/sewers/facilities.
5. All work done on MWRD structures/sewers/facilities shall be done at times agreed to by MWRD, and MWRD shall have 24 hour-a-day unrestricted access to conduct inspections.
6. No debris shall enter MWRD structures/sewers/facilities/waterways.
7. All access hatches/manhole covers on MWRD structures/manholes within the project area shall not be buried/covered.
8. All adjustments of MWRD manholes shall be completed according to approved MWRD standard specifications.
9. Any damage to MWRD structures revealed during the post construction inspection shall be repaired prior to the submittal of the RFI. All damage, including restoration work shall be repaired at the direction and to the satisfaction of, and at no cost to, MWRD.

ENGINEERING CERTIFICATIONS

Watershed Management Permit No.

2024-0053

CERTIFICATE BY DESIGN ENGINEER: I hereby certify that the project described herein has been designed in accordance with the requirements set forth in this application and all applicable ordinances, rules, regulations, local, state and federal laws, and design criteria of the issuing authority; that the storm drainage and sanitary sewer system designed for this project are proper and adequate; that where the design involves one or more connections to an existing local sewer system, the capacity of said system has been examined and the system is found to be adequate to transport the stormwater and/or wastewater that will be added through the proposed sewer without violating any provisions of the Illinois Environmental Protection Act or the rules and regulations thereunder.

Comments, if any: _____

Engineering Firm: Civiltech Engineering, Inc.

Telephone: (312) 564 - 2492

Address: 30 North LaSalle Street, Suite 3220

City: Chicago

Zip: 60602



Signature: Thomas Liliensiek Director of Water Resources
(Name and Title)

Date: 1/12/2024

Email Address: tliliensiek@civiltechinc.com

CERTIFICATE BY MUNICIPAL OR SYSTEM ENGINEER: The application and the drawings, together with other data being submitted with this application, have been examined by me and are found to be in compliance with all applicable requirements. The manner of drainage is satisfactory and proper in accordance with local requirements. The existing local sewer system to which the project discharges has been examined and the system is found to be adequate to transport the stormwater and/or wastewater that will be added through the proposed sewer without violating any provisions of the Illinois Environmental Protection Act or the rules and regulations thereunder.

I hereby certify that the project area is within the municipal corporate limits. ☒ YES ☐ NO

Owner of Local Sewer System: Village of Glenview

Professional Engineer: Timothy Horn

Telephone: 847-904-4414

Address: 2540 East Lake Avenue

City: Glenview

Zip: 60026



Signature: Timothy Horn
(Name and Title)

Date: 2/6/2024

Email Address: thorn@glenview.il.us

CERTIFICATE BY INSPECTION ENGINEER: I hereby certify that construction of the project will be in substantial compliance with the data and the plans submitted with this application; that approval will be obtained from the issuing authority prior to making any changes that would affect capacity, maintenance, design requirements, service area or the Permit requirements; that a set of RECORD drawings, signed and sealed by the undersigned Engineer will be furnished to the District or an Authorized Municipality before testing and approval by the District or Authorized Municipality of the completed work.

Engineering Firm: Civiltech Engineering, Inc.

Telephone: 312.564.2492

Address: 30 North LaSalle Street, Suite 3220

City: Chicago

Zip: 60602



Signature: Thomas Liliensiek Director of Water Resources
(Name and Title)

Date: 1/12/2024

Email Address: tliliensiek@civiltechinc.com

SPECIAL CONDITIONS

Watershed Management Permit No.

2024-0053

This Permit is issued subject to the General Conditions and the attached Special Conditions.

If Permit is granted:

- ☒ Please return two (2) copies of the Permit to the Permittee; or
- ☒ Please mail one (1) copy to Permittee and one (1) copy to the person designated below:

Name: Tom Liliensiek

Address : 30 North LaSalle Street, Suite 3220, Chicago, IL 60602

Email : tliliensiek@civiltechinc.com

CERTIFICATE BY APPLICANTS: We have read and thoroughly understand the conditions and requirements of this Permit application, and agree to conform to the Permit conditions and other applicable requirements of the District. It is understood that construction hereunder, after the Permit is granted, shall constitute acceptance by the applicants of any Special Conditions that may be placed hereon by the District or an Authorized Municipality. It is further understood that this application shall not constitute a Permit until it is approved, signed and returned by the Director of Engineering of the District or Enforcement Officer of an Authorized Municipality.

PERMITTEE	CO-PERMITTEE
The project area is within municipal corporate limits. ☒ Yes ☐ No ☐ Not Applicable	(Co-Permittee is Property Owner) Title to property is held in a land trust: ☐ Yes ☐ No If yes, Co-Permittee shall be beneficiary with Power of Direction
Municipality <u>Village of Glenview</u>	Owner _____
Address <u>2500 East Lake Avenue</u>	Address _____
City <u>Glenview</u> Zip <u>60026</u>	City _____ Zip _____
Signature <u>[Signature]</u>	Signature _____
Name <u>ADRIANA WEBB</u> (Print)	Name _____ (Print)
Title <u>ENG. DIVISION MANAGER</u>	Title _____
Date <u>2-8-2024</u> Phone <u>917-904-4114</u>	Date _____ Phone _____
Email <u>awebb@glenview.il.us</u>	Email _____

REVIEW AND APPROVAL BY THE DISTRICT OR AUTHORIZED MUNICIPALITY	
Reviewed by: <u>Peter Umho</u> (Local Sewer Systems) or (Professional Engineer)	Date <u>4/12/2023</u>
Approved for Issue	
Approved by: <u>Daniel M. Feltes</u> (For the Director of Engineering) or (Enforcement Officer)	Date <u>4/16/2024</u>



Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield, Illinois • 62794-9276 • 217-782-3397

JB Pritzker, Governor

James Jennings, Acting Director

(217) 782-1724

April 21, 2026

Matthew Formica
Village of Glenview
2500 East Lake
Glenview, IL 60026

RECEIVED

APR 27 2026

Civiltech Engineering Inc.

Re: Glenview (IL0311020)
"Plans for Proposed Federal Aid Highway - FAP Route 0348 at FAU Route 1292"
Extension of Water Main Extension Construction Permit No. 0660-FY2024

Dear Mr. Formica:

In accordance with the request made through your engineers Civiltech Engineering, Inc. received on April 9, 2026, our Construction Permit No. 0660-FY2025, issued on June 4, 2024, for "Plans for Proposed Federal Aid Highway - FAP Route 0348 at FAU Route 1292", is hereby extended.

This extension of the construction permit is void after April 20, 2027, unless construction on this project has started on or prior to that date.

Sincerely,

Chris Johnston, P.E.,
Manager, Permit Section,
Division of Public Water Supplies

CLJ:EJM

cc: Civiltech Engineering, Inc.
Elgin Regional Office

ADDITIONAL CONDITIONS:

1. When replacing water mains with lead service lines or partial lead service lines connected to them, the owner or operator of the community water supply shall provide the owner or operator of each potentially affected building that is serviced by the affected lead service lines or partial lead service lines, as well as the occupants of those buildings, with an individual written notice. The lead informational notice shall be provided at least 14 days prior to permitted water main work. The notification provided by the community water supply must satisfy the requirements of Section 17.12(jj) of the Act, 415 ILCS 5/17.12(jj). A copy of the notice used must be submitted to the Agency with the Application for Operating Permit.

The owner or operator of a community water supply planning to partially replace only the supplier-owned portion of the lead service line must notify the service line's owner, or the owner's authorized agent, and any non-owner residents the service line serves at least 45 days before the replacement. The notice must explain that the supplier will replace the supplier-owned portion of the service line and offer to replace the customer-owned portion.

When the owner or operator of a community water supply replaces a water main, the community water supply shall identify all lead service lines connected to the water main and shall comply with the requirements of Section 17.12 of the Act, 415 ILCS 5/17.12 and Ill. Adm. Code, Title 35, Subtitle F, Section 611.354 for lead service line replacement. Galvanized service lines must also be replaced if the galvanized service line is or was connected downstream to the lead piping. The owner or operator of a community water supply must also replace any lead gooseneck, pigtail or connector it owns when encountered and offer to replace any customer-owned lead gooseneck, pigtail, or connector.

The owner or operator of a community water supply conducting a full lead service line replacement must comply with the requirements of Ill. Adm. Code, Title 35, Subtitle F, Section 611.354(e). Notification must be provided to the service line's owner, or the owner's authorized agent, and any non-owner residents the service line serves within 24 hours after completing the replacement. The notice must comply with the requirements of Ill. Adm. Code, Title 35, Subtitle F, Section 611.355(a). The supplier must inform consumers about service line and premise plumbing flushing using the procedure submitted with the Lead Service Line Replacement Plan. The owner or operator of a community water supply must provide the consumer with a pitcher filter or point-of-use treatment device to reduce lead, six-months of replacement cartridges, and use instructions before returning the replaced service line to service. If the lead service line serves more than one residence or multi-unit building, the owner or operator must provide a filter, six months of replacement cartridges and use instructions to every unit in the building. The owner or operator of a community water supply must offer to the consumer to collect a follow-up tap sample between three and six months after replacing the lead service line and provide the results to the consumer.

For any partial lead service line replacements, in addition to complying with the 45-day notification requirement before replacement, the supplier must provide notice complying with Ill. Adm. Code, Title 35, Subtitle F, Section 611.355(a) before returning a service line to service. The owner or operator of a community water supply conducting a partial lead service line replacement must also comply with the requirements 35 Ill. Adm. Code, Title 35, Subtitle F, Section 611.354(d). The supplier must inform consumers about service line and premise plumbing flushing using the procedure submitted with the Lead Service Line Replacement Plan. The owner or operator of a community water supply must provide the consumer with a pitcher filter or point-of-use treatment device to reduce lead, six-months of replacement cartridges, and use instructions before returning the replaced service line to service. If the lead service line serves more than one residence or multi-unit building, the owner or operator must provide a filter, six months of replacement cartridges and use instructions to every unit in the building.

The owner or operator of a community water supply must offer to the consumer to collect a follow-up tap sample between three and six months after replacing the lead service line and provide the results to the consumer. When the owner or operator of a community water supply replaces a water main, the community water supply shall identify all lead service lines connected to the water main and shall comply with the requirements of Section 17.12 of the Act, 415 ILCS 5/17.12 and Ill. Adm. Code, Title 35, Subtitle F, Section 611.354 for lead service line replacement. Galvanized service lines must also be replaced if the galvanized service line is or was connected downstream to the lead piping. The owner or operator of a community water supply must also replace any lead gooseneck, pigtail or connector it owns when encountered and offer to replace any customer-owned lead gooseneck, pigtail, or connector.

3. A statement must be submitted with the Application for Operating Permit indicating either that no full or partial lead service lines or galvanized requiring replacement were identified or that Section 17.12 of the Act and Ill. Adm. Code, Title 35, Subtitle F, Section 611.354 was complied with for this project.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2520 WEST ILES AVENUE, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JAMES JENNINGS, ACTING DIRECTOR

(217) 782-1724

May 9, 2025

Matthew Formica
Village of Glenview
2500 East Lake
Glenview, IL 60026

Re: Glenview (IL0311020)
"Plans for Proposed Federal Aid Highway - FAP Route 0348 at FAU Route 1292"
Extension of Water Main Extension Construction Permit No. 0660-2024

Dear Mr. Formica:

In accordance with the request made through your engineers, Civiltech Engineering, Inc., in an email dated May 5, 2025, our Construction Permit No. 0660-FY2024, issued on June 4, 2024, for "Plans for Proposed Federal Aid Highway - FAP Route 0348 at FAU Route 1292", is hereby extended.

This extension of the construction permit is void after May 8, 2026, unless construction on this project has started on or prior to that date.

Sincerely,

Chris Johnston, P.E.,
Manager, Permit Section,
Division of Public Water Supplies

CLJ:jb

cc: Civiltech Engineering, Inc.
Elgin Regional Office

RECEIVED

MAY 14 2025

Civiltech Engineering Inc.

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
115 S. LaSalle Street, Suite 2203, Chicago, IL 60603
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000

595 S. State Street, Elgin, IL 60123 (847) 608-3131
2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: GLENVIEW (IL0311020)

Permit Issued to:

Village of Glenview

2500 East Lake Avenue

Glenview, Illinois 60026

PERMIT NUMBER: 0660-FY2024

DATE ISSUED: June 4, 2024

PERMIT TYPE: Water Main Extension

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

FIRM: Civiltech Engineering, Inc.

NUMBER OF PLAN SHEETS: 13

TITLE OF PLANS: "Plans for Proposed Federal Aid Highway – FAP Route 0348 at FAU Route 1292"

APPLICATION RECEIVED DATE: January 3, 2024

PROPOSED IMPROVEMENTS:

*** The installation of 17 feet of 6-inch and cured-in-place pipe of approximately 590 feet of 10-inch of existing main on Waukegan Road Glenview, IL. ***

ADDITIONAL CONDITIONS:

1. All water mains shall be satisfactorily disinfected prior to use pursuant to Ill. Adm. Code, Title 35, Subtitle F, Section 602.310. Two consecutive sets of samples collected at least 24 hours apart must show the absence of coliform bacteria. The samples must be collected from every 1,200 feet of new water main along each branch and from the end of the line. An operating permit must be obtained before the project is placed in service. The application for operating permit and supporting documents can either be mailed to this office or emailed to EPA.PWSPermits@illinois.gov. Use of the email address is preferred.

RECEIVED

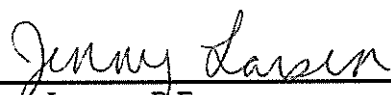
JUN 07 2024

Civiltech Engineering Inc.

2. After curing, the water main must be sampled for volatile (VOC) and semi-volatile organic chemicals (SVOC) including styrene, acetone, phenol, phthalates and any other contaminant of concern based upon the resin composition. The results must be submitted as soon as available.
3. The water main must be sampled one year after liner installation for VOC and SVOCs including styrene, acetone, phenol, phthalates and any other contaminant of concern based upon the resin composition and the results submitted to the Agency.
4. The permit approval is for the Application, Schedule B, and 13 plan sheets received on January 3, 2024, and additional information received on February 26, 2024, March 5, 2024, May 13, 2024 and May 16, 2024.

DCC: RHN

cc: Civiltech Engineering, Inc.
Elgin Regional Office
Cook County Health Department



Jenny Larsen, P.E.
Working Supervisor, Permit Section/Unit B
Division of Public Water Supplies

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

The Illinois Environmental Protection Agency Act (415 ILCS 5/39) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

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

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



Department of Transportation and Highways

PERMIT FOR WORK

Permit Division: George W. Dunne Cook County Office Building
69 W. Washington, 24th floor
Chicago, Illinois 60602
hwy.permits@cookcountyil.gov
Office: 312-603-1670

Permit Number	2024-02789
Issue Date	
Expiration Date	02/14/2025
Bond Number	

1. Owner(s) Village of Glenview

2. Description CONSTRUCTION - GOVERNMENT

3. Permit Type CONSTRUCTION

4. Emergency Permit No

5. Pavement Breaks Yes

6. Affected Routes

ROUTE	START	END	NAME	FROM (OR CROSS)	TO LIMIT
A59	23	23	EAST LAKE AVE	WAUKEGAN RD	

7. Permissions

The Cook County Transportation and Highways Department hereby grants permission and authority for work as stated in item 3 above in Cook County; on County Highway(s) stated in item 6 above subject to the general conditions and any special conditions attached to this permit, and subject to the Public Way Ordinance, as well as all laws defined therein and in conformance with all submittals made pursuant to the application process, as modified at the request of the Cook County Department of Transportation and Highways, per the plans detail noted below.

Submitted Date 02/14/2024
Project Number 22-00206-00-CH
Plan Title FAP Route 0348 22-00206-00-CH
Plan Prepared By Civiltech Engineering, Inc.
Finalized Date 04/01/2024

PERMIT FOR WORK

8. Approved Work

Work Type	Level	Fee
Com. Entrance Modification		\$ -
Combination Curb and Gutter		\$ -
Combination Curb and Gutter Removal and Replacement		\$ -
Detector Loops		\$ -
Landscaping		\$ -
Lane Closures		\$ -
Open Cut In Driveway		\$ -
Open Cut In Median		\$ -
Open Cut In Pavement		\$ -
Parkway Restoration		\$ -
Pavement Marking		\$ -
Pavement Widen/Rehabilitation (HMA/PCC)		\$ -
Private Entrance Modification		\$ -
Reflective Pavement Markers		\$ -
Sidewalk		\$ -
Signage		\$ -
Signage (Construction)		\$ -
Storm Sewer		\$ -
Street Light		\$ -
Traffic Signal		\$ -
Tree Removal		\$ -
Water Main Appurtenances		\$ -
Fire Hydrant Relocation		\$ -
	Total Fee	\$ -

This Permit will not be issued until receipt of all applicable fees is confirmed by the Cook County Department of Revenue

PERMIT FOR WORK

PERMIT FOR WORK

9. Note (Additional Rules and Specifications as Follows)

This permit includes and is subject to the "General Conditions and CCDOTH Construction Notes for Permit Work" attached hereto and incorporated into this Permit.

1.
 1. The Traffic Signal work shall be installed by an Electrical Contractor approved by the Cook County Department of Transportation and Highways.
 2. All traffic signal equipment shall be of the type and brand that is acceptable to the Cook County Highway Department. One (1) copy of all approved catalog cuts to be furnished to the County prior to installation.
 3. The contractor shall inform the CCDOTH Design Engineer at (312) 603-1734 prior to the start of any work on the contract. A minimum of five (5) working days advanced notice is required.
 4. A minimum of five (5) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the CCHD Design Engineer at (312) 603-1734 to inspect and approve the layout.
 5. Furnish the County MicroStation CAD files before the final inspection is scheduled
 6. Please furnish the MELA Division a copy of the signed permit and pdf plan for our records.
2. The contractor shall coordinate the work with the resident engineer for the Cook County project for 2023 Pavement Maintenance Program North Section: 23-PVMTN-00-PV."
3.
 - a. Cook County Right-of-Way to be restored with 4" topsoil, fertilizer and salt tolerant sod.
 - b. The general contractor, before starting the job, will deposit with the Cook County Transportation and Highways Department, Permit Office, insurance as required on Form "A".
 - c. Upon awarding a contract for the above mentioned installations, the applicant must direct its contractor to deposit a Performance and Right Of Way Restoration Bond in the amount of \$20,000.00, with said Permit Office prior to the start of work within the County Right Of Way.
 - d. The Owner assumes all responsibility and acknowledges the County of Cook is free from any liabilities that may occur during or as a result of this installation.
 - e. If there is a municipal utility on this permit and the municipal utility location of this permit is subject to the provisions of statute 605 ILCS 5/9-113 of the Illinois compiled statutes and the Cook County Utility co-ordination council, upon issuance of the approved permit all relocation work must be completed in 90 days.
 - f. For construction, the latest version of the IDOT traffic control standard for construction traffic control devices 701901 should be included with any permit involving staged construction for any off-road only work, on-road only work, and both on-road and off-road work in County right of way.
 - g. For construction impacting sidewalks and pedestrian traffic, the latest version of IDOT traffic control standard for sidewalks 701801 should be included with any permit involving staged construction for any off-road only work, and both on-road and off-road work in County right of way. Two-way pedestrian traffic shall always be maintained.
 - h. For construction impacting traffic, the latest version of the appropriate IDOT traffic control standard should be included with any off-road only work, on-road only work, and both on-road and off-road work in County right of way. Two-way traffic shall always be maintained.
 - i. Upon completion of the construction work, contact the permit office at hwy.permits@cookcountyil.gov or for final inspection.
4. Pursuant to the County policy on crosswalks, provide an IGA for the maintenance of the crosswalk.

10. Applicant

The work authorized by this Permit shall be completed by the expiration data as shown on page one (1) or above; otherwise this Permit becomes null and void.

Owner's Signature

Date**Village of Glenview**

Owner's Name (Printed)

Owner's Title

PERMIT FOR WORK

11. Authorization

Applicable Fee(s) Received. Application approved and Permit Granted by:

Superintendent of Transportation and Highways	Approved Date

PERMIT FOR WORK

12. General Conditions and CCDOTH Construction Notes for Permit Work**General Conditions**

1. **A COPY OF THIS PERMIT MUST BE KEPT ON THE JOB SITE DURING CONSTRUCTION.**
2. Definition of "Owner": The "Owner" is the Name/s listed on the Cook County Transportation and Highways Department (CCDOTH) Permit as "Owner/s". The "Owner" is the "Grantee" listed in the Public Way Regulatory Ordinance (the "Ordinance"), Chapter 66.
3. Capitalized terms used in this Permit and not otherwise defined herein shall have the meanings ascribed to them in the Public Way Regulatory Ordinance (the "Ordinance"), Chapter 66, Article III, and Sections 50 et seq. of the Cook County Code. Requirements set forth in these General Conditions are in addition to and not in limitation of the requirements of the Ordinance.
4. The CCDOTH Permit is only applicable for the work shown on the final approved submitted plans on Cook County Right of Way (ROW). The permit does not release the Owner from fulfilling the requirements of any other laws or other required permitting relating to the permitted work. It is the responsibility of the Owner to acquire all other applicable approvals and/or permits required for the proposed work in the submitted plans. Copies of the applicable approvals and/or permits shall be submitted to CCDOTH for the permit file.
5. The Owner shall fulfill all requirements set forth in the permit application and its instructions, including without limitation, permit fees, insurance and bonding are a condition of this Permit. Issuance of this Permit, without the fulfillment of all requirements by Owner shall not act as a waiver of Owner's obligation to comply with such requirements, unless approval in writing of such change is given by the Cook County Superintendent of Transportation and Highways.
6. The Permit can be revoked pursuant to the terms of the Ordinance or at the discretion of the Cook County Superintendent of Transportation and Highways.
7. The Owner shall provide two days advance notice prior to the start of work to the CCDOTH Permit Office. Email the notice to hwy.permits@cookcountyil.gov.
8. No changes, alterations, or revisions to the Permitted Work are allowed unless approved in writing by the Cook County Superintendent of Transportation and Highways or his designee.
9. If Owner discovers during the progress of the Permitted Work that subterranean conditions prohibit the construction of said improvement in and along the alignment as outlined in the plans, it is expressly understood that all Permitted Work shall cease until a proposed revised alignment has been approved by the CCDOTH and the Permit has been modified.
10. The Owner shall furnish all material to do all work required and pay all costs which may be incurred in connection with such work and shall prosecute the same diligently and without delay to completion. See Ordinance for additional requirements as to work in the Public Way.
11. All construction methods and construction materials shall be in accordance with the latest version of the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction, IDOT Supplemental Specifications and Recurring Special Provisions, IDOT Standards, Cook County Special Provisions and Cook County Standards.
12. Upon completion of the Permitted Work, Owner shall in a timely manner, (but in no event more than 30 days unless another time frame is directed by the CCDOTH Permits Division) restore the Public Way substantially to the same condition in which it was before the Permitted Work started. The work includes but is not limited to removing all debris, rubbish, materials, apparatus, tools, and equipment, as well as all excess excavated materials, from the Public Way.
13. Should future construction and operation of the highways by CCDOTH require alteration or relocation of the Owner's Facilities, such change shall be made by the Owner, its successor or assigns upon the written request of the Superintendent of CCDOTH without expense to said County or State. Requirements for any such requested alteration or relocation are further detailed in the Ordinance.
14. The Owner, its successor and assigns, assume all risk and liability for accidents and damages that may accrue to persons and property, during the prosecution of the work or any time thereafter, by reason of the location, construction, installation, operation, maintenance, repair and work referred to herein, and the Owner, by acceptance of the Permit, agrees to indemnify and save harmless Cook County from any such claims for damages and from all costs and expenses incurred on account thereof and in connection therewith.
15. In accordance with the Ordinance, and agreement by the Owner, the Owner acknowledges and agrees that the Permit is null and void if the Owner is delinquent in the payment of any tax or fee administered by the Cook County.

PERMIT FOR WORK

16. The Owner shall furnish the CCDOTH Permits Division one as-built PDF in 22"x34" format. The issued permit plans and any issued addendum plans will become the as-built plans if the owner on this permit does not submit as-built plans by the expiration date of the permit or by the last permit extension date.
17. Notify CCDOTH Permits office in writing for final inspection. The letter can be emailed to hwy.permits@cookcountyiil.gov.

CCDOTH Construction Notes**Curb and Gutter (PCC)**

1. PCC Pavement mix designs shall be per the IDOT Standard Specifications for Road and Bridge Construction art 1020.04
2. In the removal of curb and gutter, the use of any type of concrete breaker that will damage the underground structures will not be permitted.
3. Saw cut the full depth of curb and gutter at the limits of removal.
4. Construct curb and gutter in accordance with IDOT standard 606001. Provide a tied longitudinal construction joint in accordance with IDOT standard 420001, using 30" long #6 (3/4" Dia.) deformed epoxy coated tie bars at 36-inch centers.

Drainage

5. The drainage systems shall always be kept clean and free of debris.
6. The Owner shall be responsible for providing positive drainage.
7. CCDOTH reserves the right to make connections to the proposed storm sewer for the purpose of draining the highway.
8. As a condition of granting this permit, which includes the point discharge of storm water onto the Cook County Transportation and Highways Right Of Way, the Owner hereby grants permission to the Cook County Transportation and Highways Department to enter onto private property to inspect the detention control structure.

Erosion Control and Landscaping

9. The parkway shall always be kept clean and free of debris.
10. Any disturbed areas within Cook County ROW require erosion control blanket prior to final landscaping per current Illinois Environmental Protection Agency (IEPA) standards.
11. Cook County Right-of-Way to be restored with 4" topsoil, fertilizer and sod. This note supersedes any note in the plans.

Excavation and Backfill

12. The Owner shall manage the excavation, transport, and disposal of all excavated materials (i.e. soil, debris, etc.) in accordance with local, state, and federal regulations.
13. As a condition of this permit, the Owner shall request CCDOTH to identify sites in the Right-of-Way where a Highway Authority Agreement governs access to soil that exceeds the Tier 1 residential remediation objectives of 35 Ill. Adm. Code 742. The Owner shall take all measures necessary to protect human health (including worker safety) and the environment during and after any access to such soil.
14. All trenches within Cook County ROW shall be trench backfilled with FA-6 sand in accordance with Method 1 in accordance with Article 550.07 of the (IDOT) Standard Specifications for Road and Bridge Construction.

Median (PCC)

15. PCC Pavement mix designs shall be per the IDOT Standard Specifications for Road and Bridge Construction art 1020.04
16. In the removal of median, the use of any type of concrete breaker that will damage the underground structures will not be permitted.
17. Saw cut the full depth of median at the limits of removal.
18. Construct median in accordance with IDOT standard 606301. Provide a tied longitudinal construction joint in accordance with IDOT standard 420001, using 30" long #6 (3/4" Dia.) epoxy coated deformed tie bars at 36-inch centers.

Pavement, All

PERMIT FOR WORK

19. Saw cut the full depth of pavement at the limits of removal.
20. In the removal of pavement, the use of any type of concrete breaker that will damage the underground structures will not be permitted.
21. The pavement shall always be kept clean and free of debris.
22. Where a median opening is provided, the pavement shall be crowned at the centerline using a one percent cross slope.
23. Unless specified in the Permit, no equipment other than pneumatic-tired equipment used during the installation shall be permitted to stop or operate on the pavement nor shall any excavated materials be stored temporarily or otherwise on the CCDOTH pavement.
24. All pavement patch openings that are open to traffic shall be immediately surfaced with a temporary bituminous patch at least three inches in thickness. This patch then must be inspected daily and additional bituminous patch material must be placed, daily if necessary, to maintain the patched area at the same elevation as the adjacent undisturbed pavement for a period of not less than 30 days. After 30 days, permanent replacement in kind shall be made to the base course and pavement surface.

Pavement, Entrance (Driveways, Side Streets)

25. PCC Pavement mix designs shall be per the IDOT Standard Specifications for Road and Bridge Construction art 1020.04
26. HMA surface and binder course mix designs shall be per IDOT D1 Hot Mix Selection Table. Link:
[IDOT D1 Hot Mix Selection Table](#)
Path: /District Specific Standards/District 1/D1PavementDesign/HMA Selection Table(Most Recent Date)
27. For entrance installations, the Owner shall remove earth to its full depth, starting at the edge of the pavement, for the full dimensions of the proposed entrance, and replace with materials to be used in the construction of the entrance.
28. The entrance radius meeting the edge of shoulder or the back of curb must terminate 3' from the property line extended to the edge of shoulder or the back of curb. If this requirement cannot be met, a letter from the neighboring property authorizing the encroachment must be submitted.
29. The CCDOTH reserves the right to restrict access to permitted entrances on future roadway improvements.
30. The Owner acknowledges that if or when the County of Cook improves the highway the pavement composition at the above-mentioned entrance(s) may be substituted.

Pavement, Hot Mix Asphalt (HMA) Pavement, Patching, and Resurfacing

All

31. HMA surface and binder course mix designs shall be per IDOT D1 Hot Mix Selection Table. Link:
[IDOT D1 Hot Mix Selection Table](#)
Path: /District Specific Standards/District 1/D1PavementDesign/HMA Selection Table(Most Recent Date)
Pavement
32. HMA Full Depth Pavement thickness shall be 12-inch on a 12-inch thick aggregate subgrade improvement. The HMA Pavement shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 407. The aggregate subgrade improvement shall be built per the following link:
[IDOT Bureau of Design and Environment \(BDE\) Special Provision Aggregate Subgrade Improvement](#)
- Patching
33. HMA Patching shall match the existing pavement thickness. The length shall be the greater of 6 feet (measured parallel to the centerline) or 12 inches wider than the pavement opening. The patch width shall be the full lane width of each lane affected. The pavement opening shall be saw-cut to the full depth of the pavement at the limits of removal. The HMA Pavement Patch shall be in accordance with Section 442 Pavement Patching of the Standard Specifications. Class D Patches shall be used for HMA pavements and HMA bases.
34. For roadways with HMA surface regardless of HMA or PCC base, HMA surface shall be placed a minimum of 6 inches longer on each side of the pavement patch.

PERMIT FOR WORK**Resurfacing**

35. HMA Mill and Resurface Pavement thickness shall be per the approved permit plans. HMA Resurfacing shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 406.

Pavement, Portland Cement Concrete (PCC) Paving, Patching**All**

36. PCC Pavement mix designs shall be per the IDOT Standard Specifications for Road and Bridge Construction art 1020.04

Pavement

37. PCC Pavement thickness shall be 10 inches on a 12-inch thick aggregate subgrade improvement. The PCC Pavement shall be built per the IDOT Standard Specifications for Road and Bridge Construction Art 420. The aggregate subgrade improvement shall be built per the following link:

[IDOT Bureau of Design and Environment \(BDE\) Special Provision Aggregate Subgrade Improvement](#)

38. Where the proposed pavement or median abuts the existing pavement, median or curb and gutter longitudinally, provide a tied longitudinal construction joint in accordance with IDOT standard 420001, using 30" long #6 (3/4" Dia.) epoxy coated deformed tie bars at 36 inch centers. Keyed joints as shown on standard 420001 shall not be allowed.
39. Provide transverse sawed contraction joints every 15 feet in accordance with IDOT standard 420001, using 18" long #12 (1-1/2" Dia.) smooth epoxy coated dowel bars at 12-inch centers and align proposed joints with existing joints. If a proposed joint is located less than 6 feet from an existing joint, then the existing pavement or median shall be removed and replaced up to the existing joint.

Patching

40. PCC Patching shall match the existing pavement thickness. The length shall be the greater of 6 feet (measured parallel to the centerline) or 12 inches wider than the pavement opening. The patch width shall be the full lane width of each lane affected. The pavement opening shall be saw-cut to the full depth of the pavement at the limits of removal. The PCC Pavement Patch shall be in accordance with Section 442 Pavement Patching of the Standard Specifications. Class B Patches shall be used for concrete pavement and concrete bases.
41. Pavement patches greater than or equal to 15SY shall use pavement fabric in accordance with IDOT standard 420701 and provide 3 1/2 inches of clearance between the pavement surface and the top of the fabric.
42. Pavement patches longer than 11ft 3inches shall be tied longitudinally to the abutting existing pavement, median or curb and gutter provide using 30" long #6 (3/4" Dia.) epoxy coated deformed tie bars at 36-inch centers.
43. Where the proposed pavement or median abuts the existing PCC pavement or median transversally, provide a transverse joint in accordance with IDOT standard 442101, using 18" long #12 (1-1/2" Dia.) smooth epoxy coated dowel bars at 12 inch centers.

Pavement Marking

44. Modified Urethane Pavement Marking shall be used for the proposed pavement marking per IDOT Standard Specifications for Road and Bridge Construction Art 780 and 1095.
45. Water Blaster and Vacuum Recovery method shall be used for removal of pavement marking per IDOT Standard Specifications for Road and Bridge Construction Art 783 and 1101.
46. The Modified Urethane Pavement Marking installation shall be done no later than December 15 per IDOT Standard Specifications for Road and Bridge Construction Art 780.12. The minimum winter performance period extends to May 1 the next year. If pavement markings are in before Dec 15 and the permit work is not completed by May 1 the next year, the performance period will last until a request for final inspection is made. The Permits inspector will do the final pavement marking inspection during the final inspection for the whole permit. The permit cannot be closed out until this requirement is met.

Sidewalk and Bus Shelters

PERMIT FOR WORK

47. In the removal of sidewalk and bus shelter pads, the use of any type of concrete breaker that will damage the underground structures will not be permitted.
48. All proposed bus shelter and bus shelter pads must meet the current IDOT Bureau of Design and Environment (BDE) Manual and IDOT Bureau of Local Roads (BLR) Manual, Public Rights-of-Way Accessibility Guidelines (PROWAG) and Americans with Disabilities Act (ADA) requirements.
49. All proposed sidewalk (crosswalk) shall be ramped in compliance with the current IDOT BDE Manual, IDOT BLR Manual, PROWAG and ADA requirements.
50. All proposed curb ramps shall be inspected after construction. IDOT form D1 PD0031 shall be filled out for each location. If there are any deficiencies the deficiencies shall be fixed, and the form refilled out for the location until the curb ramp is compliant. A copy of the final form shall be submitted to the CCDOTH Permits office at hwy.permits@cookcountyil.gov for the permit file. CCDOTH Permits office will forward the completed forms to the Cook County ADA Coordinator for the Cook County ADA file.
51. All The following CCDOTH Special Provision shall apply to all sidewalk.
 - 310 Detectable Warnings (Special), Cast Iron. (provided in permit review)
52. The following CCDOTH Standard shall apply to all sidewalk.
 - C-9 Cook County PCC Sidewalk Construction (Expansion Joints) Detail (provided in permit review.)
53. Proposed sidewalk shall be 8" thick through driveways and at curb ramps.
54. Concrete sidewalks shall be continuous through all driveways with a maximum cross slope of 1.5%.

Traffic Control

55. Owner shall provide and maintain at its own expense, such temporary roads, and approaches, as may be necessary to provide access to driveways, houses, buildings, or other property abutting the site of the Permitted Work. Access shall not be blocked.
56. No temporary lane closures or temporary traffic detours relating to Permitted Work will be allowed between the hours of 6 a.m. to 9 a.m. and 3 p.m. to 6:30 p.m., (other than as allowed for emergency maintenance per the Ordinance).
57. All signs shall conform to the latest Manual on Uniform Traffic Control Devices (MUTCD) and Illinois Supplemental to the Manual on Uniform Traffic Control Devices (MUTCD)
58. All traffic control devices shall conform to the latest IDOT Standard Specifications for Road and Bridge Construction, IDOT Highway Standards, and the IDOT approved product list.
59. All lane closures shall be in accordance with the latest IDOT Highway Standards.
60. The Owner shall conduct its operations in a manner so as to insure the minimum hindrance to traffic, using the pavement and at no time shall its operations obstruct more than one half (1/2) of the available pavement width.
61. When existing traffic control signs such as stop signs, stop ahead signs, and crossroad signs are removed in the progress of the Permitted Work, said signs shall be immediately reset as close as possible to their original location. After the completion of the Permitted Work has been approved, said traffic control signs shall be restored to their original position and condition. If modifications are needed a revised signage plan can be submitted to Permits for review and approval.

Traffic Signals, Lighting, Other Electrical

62. To ensure proper installation, the owner shall hire an inspector for all electrical work. The inspector shall be independent from the contractors working on the permit. The inspector's purpose is to ensure the contractor is installing the electrical items per the plans and specifications. The inspector shall be familiar with the field installation inspection, material inspection and documenting requirements of the Cook County, IDOT, and/or Municipal electrical work items on the permit. The work items may include but are not limited to Traffic Signal items, Traffic Signal Interconnect items, Flashing Beacon items, Lighting items, etc.
63. Care is to be taken as not to damage any of the existing traffic signal conduits, fiber cables and equipment. If any of the traffic signal conduits, cables and/or equipment is damaged, the Contractor shall repair and/or replace the conduits, cables and/or equipment at no cost to the County.

PERMIT FOR WORK

64. Cook County is not a member of JULIE (Joint Utility Locating Information for Excavators). For location information on Cook County Traffic Signal equipment, Traffic Signal Interconnect equipment, Flashing Beacons equipment, Lighting equipment, etc., please contact the Mechanical, Electrical, Architectural and Landscaping (MELA) Division at 312-603-1734.
65. If this contract requires the services of an electrical contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT and CCDOTH facilities prior to performing any work. If this contract does not require the services of electrical contractor, the Contractor may request one free locate for existing IDOT and CCDOTH electrical facilities from the Electrical Maintenance Contractor(s) prior to the start of any work. Additional requests may 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.

Utilities, All

66. It shall be the responsibility of the Owner to co-ordinate with utility companies sharing the Cook County ROW and relocate the existing power poles, fire hydrants, guardrail and appurtenances as needed for the proposed permit work. There shall be no cost to the county.
67. As a requirement of this permit all utility owners (private and government) shall maintain a membership with J.U.L.I.E. locating service until the utility is completely removed from Cook County ROW.

Utilities, Aerial

68. All aerial lines crossings or parallel must have a minimum clearance of 18'3".
69. Pole owner permission is required for all cable, conduit, and other appurtenance connection to a pole.
70. Proposed aerial cable shall not block the existing traffic signal heads.
71. Proposed aerial cable shall not touch existing traffic signal equipment.

Utilities, Underground

72. All auger pits and excavations shall be as far away from the edge of pavement or back of curb as possible, and wood or steel sheeting shall be used. Auger pits shall be protected with concrete barrier walls if within clear zones. The ends of the concrete barrier walls shall be protected with crash attenuators. The barrier wall and crash attenuators design shall meet IDOT BDE Manual and IDOT BLR Manual Design requirements. Open holes left overnight shall fenced off and covered.
73. All external casing voids shall be pressure grouted or filled with trench backfill using pumping or jetting outside of the casing. The inside of the casing shall be sealed or filled using the external void procedures.
74. A minimum depth of 42 inches shall be maintained from the ground surface to the top of the conduit, cable, or pipe and a minimum depth of 36 inches from the true flow line of the drainage ditch to the top of the conduit, cable or pipe.
75. Proposed underground utilities running parallel to existing water main or sanitary sewer shall adjust the alignment if the utility is within 5 feet of the outer wall of the water main or sanitary sewer. The proposed utility shall maintain 5 feet or greater while running parallel to the existing water main or sanitary sewer. The distance between parallel or crossing sanitary or storm sewer with water main shall meet IEPA requirements.

Winter Moratorium Condition

76. During the winter months, (November 1 through April 15) the CCDOTH imposes a moratorium for the open cutting of pavement due to snow removal and the scarcity of ready mixes required to properly restore the pavement. This includes observation holes over existing utility facilities while performing directional bore operations, as well as lane closures for manhole access.
77. Each request to open cut the pavement or require a lane closure will be decided on a case by case basis. Should the request be approved, the following measures will be taken and adhered to:
- Unless it is a dire emergency, no lane closures will be set up or work performed within the pavement areas on days that snow is predicted, or if the snow has yet been removed from the pavement.
 - There will be no overnight lane closures, unless approved in advance by CCDOTH.
 - All restoration must be completed by the end of each workday or backfill is required. The use of steel plates is prohibited. The temporary pavement patch size shall be backfilled with flowable fill (per Section 1019 of the Standard Specifications for Road and Bridge Construction).

PERMIT FOR WORK

- All temporary pavement restorations will be permanently restored in the following Spring .

Contractor \$20,000 Bond and Insurance A (Individual Permits) Requirements for Cook County Permit

Bond

1. Once the permit number is assigned contractor can process and submit bond. The blank bond form is on the Permits Website.

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS PERMIT DIVISION

\$20,000 BOND AND INSURANCE A REQUIREMENTS (INDIVIDUAL PERMITS)

Used for commercial, residential, and government, etc. permits.

Bond,

Once the permit number is assigned contractor can process and submit bond. The blank bond form is on the Permits Website.
<https://www.cookcountyl.gov/service/construction-permits-online-payment>

A copy of the bond shall be emailed to hwyl.permits@cookcountyl.gov before the permit can be issued. The original bond form and attachments shall be mailed to CCDOTH Permits Division.

The bond must be properly executed with the signature of the officers of company and have the company corporate seal. If the contractor is the sole beneficiary, it should be stated on the bond.

Bonds will not be released until the insurance requirements are met.

Insurance,

Once the permit number is assigned contractor can process and submit bond. The contractor shall email hwyl.permits@cookcountyl.gov the insurance for the specified permit number. In the event the insurance expires or is canceled prior to the completion of the permit project, the permit project will be stopped until the insurance coverage is updated and accepted by CCDOTH Permits Division.

Insurance coverage shall be with insurance companies licensed to do business in the State of Illinois and are subject to approval by the CCDOTH Permits Division.

Contractor and/or insurance companies must notify the CCDOTH Permits Division when there is a change of address, and/or change of insurance company. The permit number must always be on all correspondence.

The current certificate of insurance must remain on file until the CCDOTH Permits Division releases the bond.

If you have any questions, please contact the CCDOTH Permits Division at hwyl.permits@cookcountyl.gov .

2020-10

FORM20A.

Permit No.: _____ Bond No.: _____

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS
PERMIT BOND

Cook County Department of Transportation and Highways Permits Office
 George W. Dunne Cook County Office Building
 69 W. Washington, 24th Floor, Chicago, Illinois 60602

312.603.1670
 312.603.9943

KNOW ALL MEN BY THESE PRESENTS, that We (Principle Name) _____
 as Principal, and (Surety Company Name) _____
 as surety, are held and firmly bound unto The County of Cook, a body politic and corporate of the State of Illinois, in the
 penal sum of Twenty Thousand and no cents dollars (\$20,000.00) lawful money of the United State of America, for the
 payment of which sum of money, well and truly to be made, we bind ourselves, our heirs, executors and administrators or
 our successors and assigns, jointly or severally, firmly by these presents.

WHEREAS, The County of Cook of the State of Illinois is about to grant to the Principal permission and authority to
 construct, install, operate and maintain certain installations, work or improvements in, under, along or upon a certain
 highway in Cook County, Illinois, identified as:

COUNTY HIGHWAY(s) 1. CHOOSE HIGHWAY _____

The condition of the above obligation is such that if the said Principal shall do the work as described in said permit and upon
 completion of same shall, within 10 days, at the Principle's own cost, restore said highway substantially to the same
 condition in which it was before said work was commenced, and shall remove all debris, rubbish, materials, apparatus, tools
 and equipment as well as all excess excavated materials from the right of way of said highway, all to the satisfaction of the
 County Superintendent of Transportation and Highways for The County of Cook, and shall indemnify and save harmless
 The County of Cook against all claims for damages to persons or property on account of the prosecution of said work, and
 the construction, location, operation and maintenance of the proposed installations work or improvements; also, against all
 costs and expenses which may be incurred by The County of Cook on account of or in connection with such claims, then
 the above obligation to be void, otherwise to remain in full force and effect.

Note: this bond shall be held for one year if the permit requires an open cut in the pavement. Upon completion of said work
 the Principle must notify the Permits Division, in writing, by sending an email to hwy.permits@cookcountyil.gov requesting a
 prefinal inspection. The one year starts on the date of notification.

If the permit does not require an open cut or if the one year open cut requirement has been met, upon completion of said
 work the Principle must request, in writing, by sending an email to hwy.permits@cookcountyil.gov requesting a final
 inspection and release of this bond.

This bond will remain in full force and effect until said bond is released, in writing, by the Cook County Department of
 Transportation and Highways Permits Division.

In witness whereof, we have duly executed the foregoing this _____ day of _____, 20____

Surety _____ Principle _____
 Address _____ Address _____
 City/State _____ City/State _____
 Contact Name _____ Contact Name _____
 Phone Number _____ Phone Number _____
 Email Address _____ Email Address _____

By: _____ By: _____
 (Affix Seal) Signature of Agent for Surety (Affix Seal) Signature of Agent for Principle

The contractor name on the bond should match exactly to the contractor name on the insurance cert or one of the many names the company does business as on the insurance cert.

- The contractor shall fill out all the fillable boxes on the bond form. The bond shall be properly executed with signature of the officers of the company and the company corporate seal. A copy of the bond shall be emailed to hwy.permits@cookcountyil.gov before the permit can be issued. The original bond form and attachments shall be mailed to CCDOTH Permits Division. Mail to: Cook County Department of Transportation and Highways, Permit Office (24th Floor), 69 West Washington Street, Chicago, IL 60602

Insurance Certification Sample A

1. The contractor shall follow the insurance requirements in the "Bond and Insurance Requirement Form 20" See Form 20 below.

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS PERMIT DIVISION

\$20,000 BOND AND INSURANCE A REQUIREMENTS (INDIVIDUAL PERMITS)

Used for commercial, residential, and government, etc. permits.

Bond,

Once the permit number is assigned contractor can process and submit bond. The blank bond form is on the Permits Website.
<https://www.cookcountyil.gov/service/construction-permits-online-payment>

A copy of the bond shall be emailed to hwy.permits@cookcountyil.gov before the permit can be issued. The original bond form and attachments shall be mailed to CCDOTH Permits Division.

The bond must be properly executed with the signature of the officers of company and have the company corporate seal. If the contractor is the sole beneficiary, it should be stated on the bond.

Bonds will not be released until the insurance requirements are met.

Insurance,

Once the permit number is assigned contractor can process and submit bond. The contractor shall email hwy.permits@cookcountyil.gov the insurance for the specified permit number. In the event the insurance expires or is canceled prior to the completion of the permit project, the permit project will be stopped until the insurance coverage is updated and accepted by CCDOTH Permits Division.

Insurance coverage shall be with insurance companies licensed to do business in the State of Illinois and are subject to approval by the CCDOTH Permits Division.

Contractor and/or insurance companies must notify the CCDOTH Permits Division when there is a change of address, and/or change of insurance company. The permit number must always be on all correspondence.

The current certificate of insurance must remain on file until the CCDOTH Permits Division releases the bond.

If you have any questions, please contact the CCDOTH Permits Division at hwy.permits@cookcountyil.gov .

2020-10

FORM20A.

Descriptions

- a. Insurance coverage shall be with insurance companies licensed to do business in the State of Illinois and are subject to approval by the Cook County Department of Transportation and Highways Permit Division. Contractor and/or Insurance Companies shall notify this office when there is a change of address for the Insurance Company, and/or change of Insurance Company.
- b. The contractor name on the Insurance shall match exactly to the contractor name on the bond. Contractor shall notify this office when there is a change of address.
- c. General Liability: Check appropriate box, list policy number, list effective date, list expiration date and shall meet the minimum limits on the right side of the page.
- d. Shall state "XCU Underground Explosion and Collapse Hazard coverage is included in the General Liability." As an alternative this statement can be located in the "Description of Operations/Location/vehicles/Exclusions added by Endorsement/Special Provisions" section.
- e. Automobile Liability: Shall have Any Auto checked or three other boxes checked. If a contractor can only check two boxes and the contractor does not own any vehicles they can submit a letter on company letterhead stating they do not own any vehicles to meet the third requirement.
In addition list policy number, list effective date, list expiration date and shall meet the minimum limits on the right side of the page.
- f. Automobile Liability Bodily Injury and Property Damage can be covered in Automobile Liability Combined Single Limit (ea accident) \$1,000,000 or Bodily Injury (per incident) \$1,000,000 and Property Damage (per incident) \$500,000.
- g. Workers Compensation and Employer's Liability: Check appropriate box, list policy number, list effective date, list expiration date and shall meet the minimum limits on the right side of the page.
- h. Shall state "Cook County Additional Insured for Both General Liability & Auto Liability for Permit 00-00-0000-C (list actual permit number assigned)" or alternate option "Cook County Additional Insured for Permit 00-00-0000-C (list actual permit number assigned)".
- i. Certificate Holder shall be Cook County Department of Transportation and Highways, Permit Office (24th Floor), 69 West Washington Street, Chicago, IL 60602



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1412-1500 Waukegan Road (ISGS SITE NO. 3667V-2)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.0816 Longitude: - 87.7986

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 22

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATION CS-2 WAS SAMPLED ADJACENT TO ISGS SITE 3667V-2. SEE FIGURE 4-6 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-250965-1. ALSO SEE FIGURE 4-6 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff P.G. (name of licensed professional engineer or geologist)

certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Weston Solutions, Inc.
Street Address: 300 Knightsbridge Parkway; Suite 360
City: Lincolnshire State: IL Zip Code: 60069
Phone: (224) 864-7200

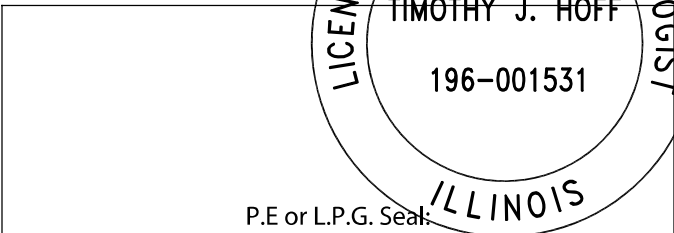
Timothy J. Hoff P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024

Date:





Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1400 Waukegan Road (ISGS SITE NO. 3667V-6)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.08041 Longitude: - 87.79879

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 161

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATION BA-2 WAS SAMPLED ADJACENT TO ISGS SITE 3667V-6. SEE FIGURE 4-6 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB IDs: 500-251398-1 AND 500-251398-2. ALSO SEE FIGURE 4-6 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff P.G. (name of licensed professional engineer or geologist)
certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Weston Solutions, Inc.
Street Address: 300 Knightsbridge Parkway; Suite 360
City: Lincolnshire State: IL Zip Code: 60069
Phone: (224) 864-7200

Timothy J. Hoff P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024

Date:



P.E or L.P.G. Seal:



Illinois Environmental Protection Agency

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Uncontaminated Soil Certification
by Licensed Professional Engineer or Licensed Professional Geologist
for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1529 Waukegan Road (ISGS SITE NO. 3667V-8)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.08264 Longitude: - 87.79823

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 4

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATION FT-1 WAS SAMPLED ADJACENT TO ISGS SITE 3667V-8. SEE FIGURE 4-6 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-250817-1. ALSO SEE FIGURE 4-3 AND FIGURE 4-4 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff P.G. (name of licensed professional engineer or geologist)

certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Weston Solutions, Inc.
Street Address: 300 Knightsbridge Parkway; Suite 360
City: Lincolnshire State: IL Zip Code: 60069
Phone: (224) 864-7200

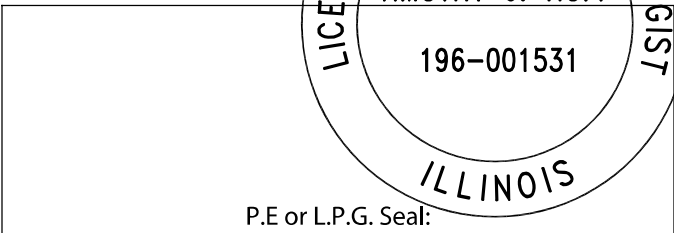
Timothy J. Hoff P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024

Date:





Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1509-1527 Waukegan Road (ISGS SITE NO. 3667V-9)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.08189 Longitude: - 87.79821

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 41

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATIONS CB9-1 AND CB9-2 WERE SAMPLED ADJACENT TO ISGS SITE 3667V-9. SEE FIGURES 4-6 AND 4-9 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-250817-1. ALSO SEE FIGURES 4-6 AND 4-9 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff P.G. (name of licensed professional engineer or geologist)
certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

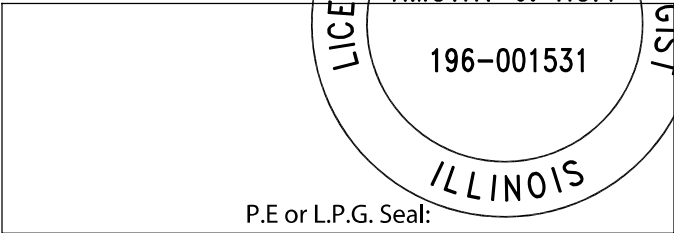
Company Name: Weston Solutions, Inc.
Street Address: 300 Knightsbridge Parkway; Suite 360
City: Lincolnshire State: IL Zip Code: 60069
Phone: (224) 864-7200

Timothy J Hoff P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024
Date:





Illinois Environmental Protection Agency

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Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1441 Waukegan Road (ISGS SITE NO. 3667V-10)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.08119 Longitude: - 87.7982

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 74

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATIONS HB-1 AND HB-2 WERE SAMPLED ADJACENT TO ISGS SITE 3667V-10. SEE FIGURE 4-6 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB IDs: 500-250817-1 AND 500-251398-1. ALSO SEE FIGURE 4-6 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff P.G. (name of licensed professional engineer or geologist)

certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Weston Solutions, Inc.
Street Address: 300 Knightsbridge Parkway; Suite 360
City: Lincolnshire State: IL Zip Code: 60069
Phone: (224) 864-7200

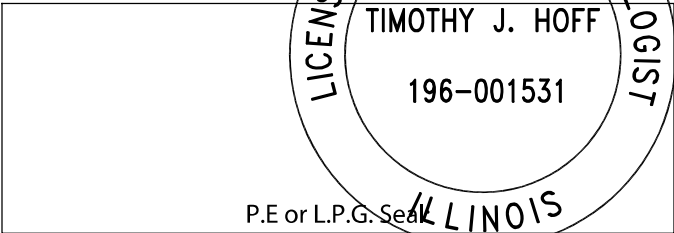
Timothy J. Hoff P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024

Date:





Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1401 Waukegan Road (ISGS SITE NO. 3667V-12)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.08026 Longitude: - 87.7983

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 101

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATIONS CB12-1 AND CB12-2 WERE SAMPLED ADJACENT TO ISGS SITE 3667V-12. SEE FIGURES 4-1 AND 4-6 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-251398-1 AND 500-251398-2. ALSO SEE FIGURES 4-1 AND 4-6 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff P.G. (name of licensed professional engineer or geologist)

certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Weston Solutions, Inc.
Street Address: 300 Knightsbridge Parkway; Suite 360
City: Lincolnshire State: IL Zip Code: 60069
Phone: (224) 864-7200

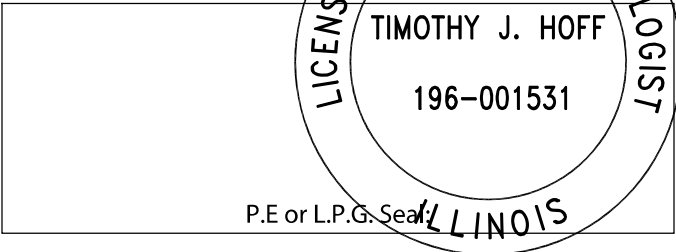
Timothy J. Hoff P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024

Date:





Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1332 and 1334-1338 Waukegan Road (ISGS SITE NOs. 3667V-20 and 3667V-21)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.07923 Longitude: - 87.79864

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 13

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATION GF-1 WAS SAMPLED ADJACENT TO ISGS SITES 3667V-20 and 3667V-21. SEE FIGURE 4-3 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-250965-1. ALSO SEE FIGURE 4-3 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff, P.G. (name of licensed professional engineer or geologist)

certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Weston Solutions, Inc.

Street Address: 300 Knightsbridge Parkway; Suite 360

City: Lincolnshire State: IL Zip Code: 60069

Phone: (224) 864-7200

Timothy J. Hoff P.G.

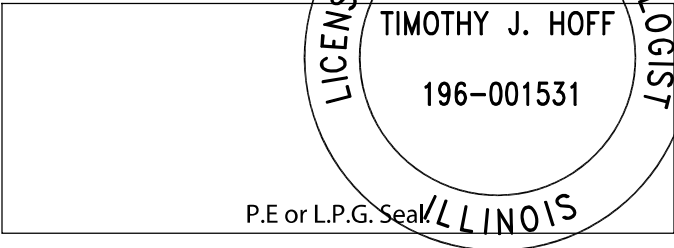
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024

Date:





Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification
by Licensed Professional Engineer or Licensed Professional Geologist
for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: IDOT FAP 348 - Waukegan Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

1335 Waukegan Road (ISGS SITE NO. 3667V-27)

City: Glenview State: IL Zip Code: 60025

County: Cook Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.07931 Longitude: - 87.79827

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☒ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): TBD Approximate End Date (mm/dd/yyyy): TBD

Estimated Volume of debris (cu. Yd.): 648

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 W. Center Court

PO Box: _____

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4627

Contact: Vanessa Ruiz

Email, if available: Vanessa.Ruiz@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

LOCATIONS LE-1, AND LE-3 THROUGH LE-5 WERE SAMPLED ADJACENT TO ISGS SITE 3667V-27. SEE FIGURES 4-1 AND 4-3 AND TABLE 4-1 OF THE PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

EUROFINS ANALYTICAL REPORT - JOB ID: 500-250965-2 AND 500-251398-2. ALSO SEE FIGURES 4-1 AND 4-3 OF THE PRELIMINARY SITE INVESTIGATION REPORT.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Timothy J. Hoff P.G. (name of licensed professional engineer or geologist)
certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

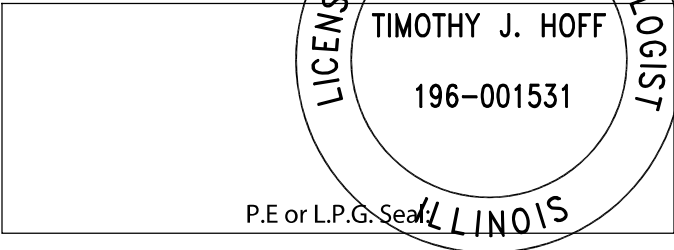
Company Name: Weston Solutions, Inc.
Street Address: 300 Knightsbridge Parkway; Suite 360
City: Lincolnshire State: IL Zip Code: 60069
Phone: (224) 864-7200

Timothy J. Hoff, P.G.
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

8/26/2024
Date:





Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: East Lake Avenue at IL43 Intersection Improvements Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

approximately 875 feet west of IL43 and approximately 900 feet east to Huntington Drive/Sanford Lane

City: Glenview State: IL Zip Code: 60025

County: Cook Township: Northfield

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.08004 Longitude: - 87.79811

(Decimal Degrees)

(-Decimal Degrees)

Identify how the lat/long data were determined:

☐ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☒ Other

ISGS Public Land Survey System. Lat/lon above refer to the approximate center of the Project Area

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): _____ Approximate End Date (mm/dd/yyyy): _____

Estimated Volume of debris (cu. Yd.): _____

II. Owner/Operator Information for Source Site

Site Owner

Name: Village of Glenview

Street Address: 2500 East Lake Avenue

PO Box: _____

City: Glenview State: IL

Zip Code: 60026 Phone: 847-904-4414

Contact: Adriana Webb Engineering Dept. Manager

Email, if available: awebb@glenview.il.us

Site Operator

Name: _____

Street Address: _____

PO Box: _____

City: _____ State: _____

Zip Code: _____ Phone: _____

Contact: _____

Email, if available: _____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

A PESA was completed by GZA/H&H in 2024 for the Project Area. Eight (8) potentially impacted properties (PIPs) were identified in connection with the Project Area as part of PESA activities. Refer to the attachments for additional information.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

Nine (9) soil borings were advanced for one or more of: VOCs, SVOCs, total TAL Metals, TCLP/SPLP Metals, and pH. Areas corresponding to each soil boring achieved the MACs and pH criteria for CCDD disposal, except for the CCDD Exclusion Areas as shown in the attached documentation (GZA-SB-2; GZA-SB-5; GZA-SB-6). Refer to attached narrative for details.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

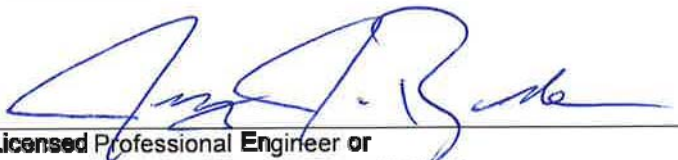
I, Jeremy J. Reynolds, P.G. (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Huff & Huff, Inc.
Street Address: 915 Harger Rd Suite 330
City: Oak Brook State: IL Zip Code: 60523
Phone: (630) 684-9100

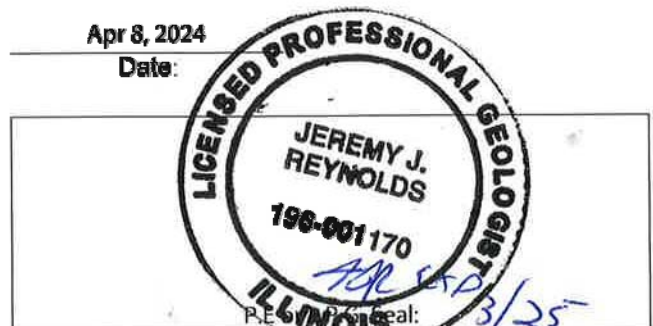
Jeremy J. Reynolds, P.G.

Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

Apr 8, 2024
Date:



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).

	COARSE AGGREGATE SUBGRADE GRADATIONS				
Grad No.	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	

	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)				
Grad No.	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.”

80274

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.

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CEMENT, FINELY DIVIDED MINERALS, ADMIXTURES, CONCRETE, AND MORTAR (BDE)

Effective: January 1, 2025

Revised: January 1, 2026

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) Cement 1001”

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 Article 606.02(h) of the Standard Specifications to read:

“(h) Fibers (Note 1)1014”

Revise Note 1 in Article 606.02(h) of the Standard Specifications to read:

“Note 1. Fibers, when required, shall only be used in the concrete mixture for slipform applications.”

Revise the third paragraph in Article 606.10 of the Standard Specifications to read:

“Welded wire fabric shall be 6 x 6 in. (150 x 150 mm) mesh, #4 gauge (5.74 mm), 58 lb (26 kg) per 100 sq ft (9 sq m).”

Revise Article 1001.01(d) of the Standard Specifications to read:

“(d) Rapid Hardening Cement. Rapid hardening cement shall be according to the Bureau of Materials Policy Memorandum “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”, and ASTM C 1600, Type URH, Type VRH, or Type RH-CAC. It shall be used according to Article 1020.04 or when approved by the Engineer. The Contractor shall submit a report from the manufacturer or an independent lab that contains results for testing according to ASTM C 1600 which shows the cement meets the requirements of either Type URH, Type VRH, or Type RH-CAC. Test data shall be less than 1 year old from the date of submittal.

Revise Article 1001.01(e) of the Standard Specifications to read:

“(e) Other Cements. Other cements shall be according to the Bureau of Materials Policy Memorandum “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”, and ASTM C 1157 or ASTM C 1600, as applicable. Other cements shall be used according to Article 1020.04 or when approved by the Engineer. For cements according to ASTM C 1157, the Contractor shall submit a report from the manufacturer or an independent lab that contains results of tests which shows the cement meets the requirements Type GU, HE, MS, MH, or LH. For cements according to ASTM C 1600, the Contractor shall submit a report from the manufacturer or an independent lab that contains results of tests which shows the cement meets the requirements Type MRH or GRH. Test data shall be less than 1 year old from the date of submittal.”

Revise Article 1002.02 of the Standard Specifications to read:

“**1002.02 Quality.** Water used with cement in concrete or mortar and water used for curing concrete shall be clean, clear, and free from sugar. In addition, water shall be tested and evaluated for acceptance according to one of the following options.

OPTION 1.

(a) Acceptable limits for acidity and alkalinity when tested according to ITP T 26.

(1) Acidity -- 0.1 Normal NaOH 2 ml max.*

(2) Alkalinity -- 0.1 Normal HCl..... 10 ml max.*

*To neutralize 200 ml sample.

(b) Acceptable limits for solids when tested according to the following.

(1) Organic (ITP T 26)..... 0.02% max.

(2) Inorganic (ITP T 26)..... 0.30% max.

(3) Sulfate (SO₄) (ASTM D 516-82) 0.05% max.

(4) Chloride (ASTM D 512) 0.06% max.

(c) The following tests shall be performed on the water sample and on deionized water. The same cement and sand shall be used for both tests.

(1) Unsoundness (ASTM C 151).

(2) Initial and Final Set Time (ASTM C 266).

(3) Strength (ASTM C 109).

The test results for the water sample shall not deviate from the test results for the deionized water, except as allowed by the precision in the test method.

OPTION 2. Water shall meet the requirements ASTM C 1602 Tables 1 and 2 as outlined in Sections 5.1, 5.2, and 5.4.”

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 (Na₂O + 0.658K₂O) 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 (Na₂O + 0.658K₂O) 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.”

Add the following Section to the Standard Specifications.

“SECTION 1014. FIBERS FOR CONCRETE

1014.01 General. Fibers used in concrete shall be Type II or Type III (polyolefin or carbon) according to ASTM C 1116. The testing required for Type II fibers or Type III polyolefin fibers shall be performed by an independent lab a minimum of once every five years, and the test results provided to the Department. Manufacturers of Type III carbon fibers shall provide materials certification documentation not more than 6 years old a minimum of once every 5 years to the Department. The Department will maintain a qualified product list. The method of inclusion of fibers into concrete mixtures shall be according to the manufacturer’s specifications.

At the discretion of the Engineer, the concrete mixture shall be evaluated in a field demonstration for fiber clumping, ease of placement, and ease of finishing. The field demonstration shall consist of a minimum 2 cu yd (1.5 cu m) trial batch placed in a 12 ft x 12 ft (3.6 m x 3.6 m) slab.

1014.02 Concrete Gutter, Curb, Median and Paved Ditch. Fibers shall be Type III. Fibers shall have a minimum length of 1/2 in. (13 mm) and a maximum length of 0.75 in. (19 mm). The maximum dosage rate in the concrete mixture shall not exceed 1.5 lb/cu yd (0.9 kg/cu m). The minimum dosage rate shall be per the manufacturer’s recommendation.

1014.03 Concrete Inlay or Overlay. Fibers shall be Type III. Fibers shall have a minimum length of 1.0 in. (25 mm), a maximum length of 2 1/2 in. (63 mm), and a maximum aspect ratio (length divided by the equivalent diameter of the fiber) of 150. The maximum dosage rate shall not exceed 5.0 lb/cu yd (3.0 kg/cu m). The minimum dosage rate shall be per the manufacturer’s recommendation.

1014.04 Bridge Deck Fly Ash, Ground Granulated Blast Furnace (GGBF) Slag, High Reactivity Metakaolin, or Microsilica (Silica Fume) Concrete Overlay. Fibers shall be Type III. The dosage rate shall be a minimum of 3.0 lb/cu yd (1.8 kg/cu m), unless a field demonstration according to Article 1014.01 indicates that a lower dosage rate is necessary. Based on the results of the field demonstration, the Department has the option to reduce the dosage rate of fibers, but the dosage will not be reduced to less than 2.0 lb / cu yd (1.2 kg/cu m).

1014.05 Bridge Deck Latex Concrete Overlay. Fibers shall be Type II or III. Fibers shall have a minimum length of 0.75 in. (19 mm), a maximum length of 1.75 in. (45 mm), and an aspect ratio (length divided by the equivalent diameter of the fiber) of between 70 and 100. The dosage rate shall be a minimum of 3.0 lb/cu yd (1.8 kg/cu m), unless a field demonstration according to Article 1014.01 indicates that a lower dosage rate is necessary. Based on the results of the field

demonstration, the Department has the option to reduce the dosage rate of fibers, but the dosage will not be reduced to less than 2.0 lb/cu yd (1.2 kg/cu m)."

Add the following Section to the Standard Specifications:

"SECTION 1015. HIGH PERFORMANCE SHOTCRETE

1015.01 Packaged Shotcrete With Aggregate. The packaged shotcrete with aggregate shall be a pre-blended dry combination of materials for the wet-mix shotcrete method according to ASTM C 1480, Type FA or CA, Grade FR, Class I. The fibers shall be Type III according to Article 1014.01. The cement and finely divided minerals in the mixture shall be a minimum 6.65 cwt/cu yd (395 kg/cu m), and the portland cement shall not be below 4.70 cwt/cu yd (279 kg/cu m). Microsilica is required in the mixture and shall be a minimum of 5 percent by weight (mass) of cementitious material, and a maximum of 10 percent. Strength requirements shall be according to ASTM C 1480 except that the strength at 28 days shall be at least 4000 psi (27,500 kPa). Strength testing shall be according to ASTM C 1140. The air content as shot shall be 4.0 – 8.0 percent when tested according to AASHTO T 152, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm).

The packaged shotcrete shall have a water soluble chloride ion content of less than 0.15% by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260.

The testing according to ASTM C 1480, ASTM C 1140, AASHTO 152, and ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Batching and mixing shall be per the manufacturer's recommendations.

1015.02 Packaged Shotcrete Without Aggregate. The packaged shotcrete that does not include pre-blended aggregate shall be according to Article 1015.01, except the added aggregate shall be according to Articles 1003.02 and 1004.02. The aggregate gradation shall be according to the manufacturer. The Department will maintain a qualified product list. Batching and mixing shall be per the manufacturer's recommendations."

Revise Section 1017 of the Standard Specifications to read:

"SECTION 1017. PACKAGED, DRY, COMBINED MATERIALS FOR MORTAR AND CONCRETE

1017.01 Mortar. 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 according to AASHTO T 161. For prestressed concrete applications, the mortar shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The testing according to ASTM C 387, AASHTO T 161, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every five years, and the test results

shall be provided to the Department. The Department will maintain a qualified product list. Mixing of the high-strength mortar shall be according to the manufacturer's specifications.

1017.02 Concrete. The materials, testing, and preparation of aggregate for the "high slump" packaged concrete mixture shall be according to ASTM C 387. The mixture shall be air entrained, the slump shall be 5-10 in. (125-250 mm), and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). Strength requirements shall be according to ASTM C 387 except that the strength at 28 days shall be at least 4000 psi (27,500 kPa). The "high slump" packaged concrete mixture shall have a water soluble chloride ion content of less than 0.15% by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260. The testing according to ASTM C 387, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing shall be per the manufacturer's recommendations.

1017.02 Self-Consolidating Concrete. The materials, testing, and preparation of aggregate for the "self-consolidating concrete" packaged concrete mixture shall be according to ASTM C 387. The mixture shall be air entrained, it should be uniformly graded, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). Strength requirements shall be according to ASTM C 387 except that the strength at 28 days shall be at least 4000 psi (27,500 Pa). Slump flow range shall be 22 in. (550 mm) minimum to 28 in. (700 mm) maximum when tested according to AASHTO T 347. The visual stability index shall be a maximum of 1 when tested according to AASHTO T 351. At the option of the manufacturer, either the J-Ring value shall be a maximum of 2 in. (50 mm) when tested according to AASHTO T 347 or the L-Box blocking ratio shall be a minimum of 80 percent when tested according AASHTO T 419. The hardened visual stability index shall be a maximum of 1 when tested according to AASHTO R 81.

The "self -consolidating concrete" packaged concrete mixture shall have a water soluble chloride ion content of less than 0.15 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260.

The testing according to ASTM C 387, AASHTO T 347, AASHTO T 351, AASHTO T 419, AASHTO R 81, ASTM C 1218 and AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing shall be per the manufacturer's recommendations."

Revise Article 1018.01 of the Standard Specifications to read:

"1018.01 Requirements. The rapid hardening mortar or concrete shall be according to ASTM C 928 and shall have successfully completed and remain current with the AASHTO Product Eval and Audit Rapid Hardening Concrete Patching Materials (RHCP) testing program. R1, R2, or R3 concrete shall be air entrained, the slump shall be 5-10 in. (125-250 mm), and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). For prestressed concrete applications, the mortar or concrete shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260;

and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The Department will maintain a qualified product list. Mixing of the mortar or concrete shall be according to the manufacturer's specifications..”

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. The air content produced by the admixture shall be 15-25 percent when incorporated into Mix 2 or an equivalent mixture as determined by the Department and tested according to AASHTO T 121 or AASHTO T 152. The testing according to AASHTO T 121 or AASHTO T 152 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list.”

Revise the third paragraph of Article 1019.04 of the Standard Specifications to read:

“The Engineer will instruct the Contractor to adjust the proportions of the mix design in the field as needed to meet the design criteria, provide adequate flowability, maintain proper solid suspension, or other criteria established by the Engineer.”

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 Note 9 of Table 1 of Article 1020.04 of the Standard Specifications to read:

“(9) The cement shall be a rapid hardening according to Article 1001.01(d). Minimum or maximum cement factor may be adjusted when approved by the Engineer.”

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 Article 1020.05(b)(5) of the Standard Specifications to read:

“(5) For Class PP-4 concrete, a high range water-reducing admixture, retarder, and/or hydration stabilizer may be used in addition to the air-entraining admixture. The Contractor also has the option to use a water-reducing admixture with the high range water-reducing admixture. An accelerator shall not be used. A mobile portland cement concrete plant shall be used to produce the patching mixture.

For PP-5 concrete, a non-chloride accelerator, high range water-reducing admixture, retarder, hydration stabilizer, and/or air-entraining admixture may be used. The accelerator, high range water-reducing admixture, retarder, hydration stabilizer, and/or air-entraining admixture shall be per the Contractor’s recommendation and dosage. The qualified product list of concrete admixtures shall not apply. A mobile portland cement concrete plant shall be used to produce the patching mixture.”

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.”

Add Article 1021.09 of the Standard Specifications as follows:

“1021.09 Latex Admixtures. The latex admixture shall be a uniform, homogeneous, non-toxic, film-forming, polymeric emulsion in water to which all stabilizers have been added at the point of manufacture. The latex admixture shall not contain any chlorides and shall contain 46-49 percent solids.

In lieu of meeting the requirements of Article 1021.01, the Contractor shall submit a manufacturer's certification that the latex emulsion meets the requirements of FHWA Research Report RD-78-35, Chapter VI. The certificate shall include the date of manufacture of the latex admixture, batch or lot number, quantity represented, manufacturer's name, and the location of the manufacturing plant. The latex emulsion shall be sampled and tested in accordance with RD-78-35, Chapter VII, Certification Program.

The latex admixture shall be packaged and stored in containers and storage facilities which will protect the material from freezing and from temperatures above 85°F (30°C). Additionally, the material shall not be stored in direct sunlight and shall be shaded when stored outside of buildings during moderate temperatures.”

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 ASTM C 1107.

For prestressed concrete applications, the nonshrink grout shall have a water soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride ion content shall be less than 0.15 percent by weight of cementitious material. The testing according to ASTM 1107, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing of the nonshrink grout shall be according to the manufacturer’s specifications.”

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 Article 1103.04 of the Standard Specifications to read:

"1103.04 Mobile Portland Cement Concrete Plants. The mobile concrete plant shall be according to AASHTO M 241 and the Bureau of Materials Policy Memorandum "Approval of Volumetric Mobile Mixers for Concrete". The mixer shall be capable of carrying sufficient unmixed materials to produce not less than 6 cu yd (4.6 cu m) of concrete."

Revise the first two sections of Check Sheet #11 "Subsealing of Concrete Pavements" of the 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/Sections 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 Materials section of Check Sheet #28 "Portland Cement Concrete Inlay or Overlay" of the Recurring Special Provisions to read:

"Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Fibers for Concrete.....	1014
(c) Protective Coat.....	1023.01

Note 1. Class PV concrete shall be used, except the cement factor for central mixed concrete shall be 6.05 cwt/cu yd (360 kg/cu m). A cement factor reduction according to Article 1020.05(b)(8) of the Standard Specifications will be permitted. CA 5 shall not be used and CA 7 may only be used for overlays that are a minimum of 4.5 in. (113 mm) thick. The Class PV concrete shall have a minimum flexural strength of 550 psi (3800 kPa) or a minimum compressive strength of 3000 psi (20,700 kPa) at 14 days.”

80460

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Add the following to Section 109 of the Standard Specifications.

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

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

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

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

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

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

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

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

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

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

80384

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.

80261

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: July 2, 2026

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 **20%** 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 IL 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.

PLEASE NOTE: As of October 3, 2025, the U.S. Department of Transportation issued an Interim Final Rule requiring all existing DBE and ACDBE certifications to be re-evaluated for social and economic disadvantage without consideration of race or gender. As of March 24, 2026, the ILUCP has completed reevaluation of those firms that submitted required information by January 31, 2026. DBE and ACDBE Certifications appearing in the IL UCP directory as certified have been recertified under the current federal regulations and may be counted for DBE goal credit. DBE and ACDBE firms appearing in this directory as ineligible have not submitted required documentation for reevaluation to date. Ineligible firms cannot currently be counted for DBE goal credit, but HAVE NOT BEEN DECERTIFIED and may still submit documentation to be reevaluated. All firms decertified under the October 3, 2025

Interim Final Rule reevaluation process have been removed from the Directory. Additional information regarding the IFR and the current status of the DBE/ACDBE program can be found at <https://idot.illinois.gov/doing-business/certifications/dbe.html>.

PLEASE BE ADVISED THAT A FIRM THAT IS INDICATED AS INELIGIBLE CANNOT BE USED FOR GOAL CREDIT. IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO VERIFY THAT ANY FIRM RELIED UPON FOR DBE GOAL CREDIT IN A UTILIZATION PLAN IS CURRENTLY CERTIFIED AND CAN BE COUNTED FOR GOAL CREDIT AT THE TIME OF BID.

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.

80029

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.”

80467

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.

80229

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.”

80446

INLET FILTERS

Effective: April 1, 2026

Revise the first paragraph of Article 1081.15(h) of the Standard Specifications to read:

“(h) Inlet Filters. An inlet filter shall consist of a steel frame with a two piece geotextile fabric bag or a single reinforced geotextile fabric bag attached with a stainless steel band and locking cap that is suspended from the frame. A clean, used bag and a used steel frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the inlet filter assembly shall be according to the following.”

Revise Article 1081.15(h)(3) of the Standard Specifications to read:

“(3) Geotextile Fabric Bag. The sediment bag shall have a minimum silt and debris capacity of 2.0 cu ft (0.06 cu m). The sediment bag shall also meet one of the following options.

a. OPTION 1. Two piece geotextile fabric bag.

The inner filter bag shall be constructed of a polypropylene geotextile fabric according to the following.

Inner Filter Bag		
Material Property	Test Method	Minimum Average Roll Value
Grab Tensile Strength	ASTM D 4632	100 lb (45 kg)
Grab Tensile Elongation	ASTM D 4632	50%
Puncture Strength	ASTM D 4833/ ASTM D 6241	65 lb (29 kg)
Trapezoidal Tear	ASTM D 4533	45 lb (20 kg)
UV Resistance	ASTM D 4355	70% at 500 hours
Apparent Opening Size	ASTM D 4751	No. 70 (212 µm) sieve
Permittivity	ASTM D 4491	2.0/sec
Water Flow Rate	ASTM D 4491	145 gpm/sq ft (5900 Lpm/sq m)

The outer reinforcement bag shall be constructed of a polyester mesh material according to the following.

Outer Reinforcement Bag		
Material Property	Test Method	Value
Content	ASTM D 629	Polyester
Weight	ASTM D 3776	4.55 oz/sq yd (155 g/sq m) $\pm$ 15%
Apparent Opening Size	ASTM D 4751	No. 30 (600 μ m) sieve
Water Flow Rate	ASTM D 4491	225 gpm/sq ft (9150 Lpm/sq m)
Burst	ASTM D 3786/ ASTM D 3787	120 psi (830 kPa) min.
Thickness	ASTM D 1777	0.040 $\pm$ 0.0050 in. (1.0 $\pm$ 0.1 mm)

b. OPTION 2. Reinforced geotextile fabric bag.

The filter bag shall be constructed of a polypropylene geotextile fabric reinforced with continuous filament fiberglass according to the following.

Reinforced Filter Bag		
Material Property	Test Method	Value or Minimum Average Roll Value
Weight	ASTM D 3776	5.00 oz/sq yd (170 g/sq m) $\pm$ 15%
Grab Tensile Strength	ASTM D 4632	200 lb (90 kg)
Grab Tensile Elongation	ASTM D 4632	50%
Puncture Strength	ASTM D 4833/ ASTM D 6241	95 lb (42 kg)
Trapezoidal Tear	ASTM D 4533	70 lb (31 kg)
Burst Strength	ASTM D 3786/ ASTM D 3787	325 psi (2240 kPa)
UV Resistance	ASTM D 4355	70% at 500 hours
Apparent Opening Size	ASTM D 4751	No. 70 (212 μ m) sieve
Permittivity	ASTM D 4491	2.0/sec
Water Flow Rate	ASTM D 4491	145 gpm/sq ft (5900 Lpm/sq m)

- (4) Certification. The manufacturer shall furnish a certification with each shipment of inlet filters, stating the amount of product furnished and that the material complies with these requirements.”

PAVEMENT MARKING (BDE)

Effective: April 1, 2025

Revised: November 1, 2025

Revise the fourth sentence of the fourth paragraph of Article 780.05 of the Standard Specifications to read:

“Grooves for letters and symbols shall be cut in a rectangular shape or in the shape of the proposed marking so the entire marking will fit within the limits of the grooved area.”

Revise the last sentence of the third paragraph of Article 780.08 of the Standard Specifications to read:

“The Contractor shall install the preformed plastic pavement markings according to the manufacturer’s recommendations.”

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.”

80464

PERFORMANCE GRADED ASPHALT BINDER (BDE)

Effective: January 1, 2023

Revised: April 1, 2026

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 (SBS). Elastomers shall be added to the base asphalt binder to achieve the specified performance grade and shall be a styrene-butadiene-styrene without oil extension. The polymer modified asphalt binder shall be smooth, homogeneous, and be according to the following requirements for the grade shown on the plans.

Requirements for Styrene-Butadiene Copolymer (SBS) Modified Asphalt Binders			
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.	
Tests on Residue from Rolling Thin Film Oven Test (RTFO), AASHTO T 240			
Multiple Stress Creep Recovery (MSCR), AASHTO T 350			
Asphalt Grade	Test Temperature	Maximum J _{nr} (3.2 kPa)	Minimum % Recovery (3.2 kPa)
SBS 76-22	64 °C	≤ 0.5	≥ 75 %
SBS 70-22		≤ 2	≥ 30 %
SBS 76-28	58 °C	≤ 0.5	≥ 80 %
SBS 70-28		≤ 1	≥ 60 %
SBS 64-28		≤ 2	≥ 30 %

- (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.

Requirements for Ground Tire Rubber (GTR) Modified Asphalt Binders		
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, 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 Article 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.

Requirements for Softener Modified (SM) 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)	≥ 54 %	

- (4) Polymer/Softener Modification (SBS/SM). Polymer/Softener modification is the addition of organic compounds, such as engineered flux, bio-oil blends, modified vegetable oils, amines, and fatty acid derivatives, used in combination with SBS modified PG asphalt binder as modified in accordance with Article 1032.05(b)(1) to achieve the specified performance grade. Polymer/Softeners shall be compatible with

each other and dissolved, dispersed, or reacted in the asphalt binder to enhance its performance and shall remain compatible with the asphalt binder with no separation. Polymer/Softeners shall not be added to modified PG asphalt binder as defined in Article 1032.05(b)(2).

An Attenuated Total Reflectance-Fourier Transform Infrared spectrum (ATR-FTIR) shall be collected for both the polymer and the softening compound as well as the polymer/softener modified asphalt binder at the dose intended for qualification. The ATR-FTIR spectra shall be collected on unaged polymer/softener modified binder, 20-hour Pressurized Aging Vessel (PAV) aged polymer/softener modified binder, and 40-hour PAV aged polymer/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, *.I[0-9], *.IGM, *.ABS, *.DRT, *.SBM, *.RAS) shall be submitted to the Central Bureau of Materials.

Requirements for Polymer/Softener Modified (SBS-SM) Asphalt Binders			
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.	
Tests on Residue from Rolling Thin Film Oven Test (RTFO), AASHTO T 240			
Multiple Stress Creep Recovery (MSCR), AASHTO T 350			
Asphalt Grade	Test Temperature	Maximum J _{nr} (3.2 kPa)	Minimum % Recovery (3.2 kPa)
SBS-SM 76-22	64 °C	≤ 0.5	≥ 75 %
SBS-SM 70-22		≤ 2	≥ 30 %
SBS-SM 76-28	58 °C	≤ 0.5	≥ 80 %
SBS-SM 70-28		≤ 1	≥ 60 %
SBS-SM 64-28		≤ 2	≥ 30 %
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, Δ G* _{peak} τ, 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)			≥ 60 %

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 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 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.”

80441

RAISED REFLECTIVE PAVEMENT MARKERS (BDE)

Effective: November 1, 2025

Revise the eighth sentence of the second paragraph of Article 781.03(a) of the Standard Specifications to read:

“A rapid setting epoxy selected from the Department’s qualified product list for raised reflective pavement markers shall be poured into the cut to within 3/8 in. (9 mm) of the pavement surface.”

Revise the first sentence of Article 1096.01 of the Standard Specifications to read:

“**1096.01 Raised Reflective Pavement Markers.** Raised reflective pavement markers shall meet the following requirements and be on the Department’s qualified product list.”

80473

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2024

Revised: April 1, 2026

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 (RSMDR).”

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 fourth paragraph of Article 669.10 of the Standard Specifications.

"Regulated substances monitoring will be measured for payment per calendar day, where 4 or more hours of monitoring activities is defined as 1.0 calendar day and less than 4 hours of monitoring activities is defined as 0.5 calendar day."

Revise the second paragraph of Article 669.11 of the Standard Specification to read:

"Regulated substances monitoring, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day for REGULATED SUBSTANCES MONITORING. In no case will more than 1.0 calendar day be paid on a given calendar day."

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."

80455

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."

80457

SIGN PANELS AND APPURTENANCES (BDE)

Effective: January 1, 2025

Revised: January 1, 2026

Add Article 720.02(c) of the Standard Specifications to read:

“(c) Aluminum Epoxy Mastic 1008.03”

Revise the second and third paragraphs of Article 720.02 of the Standard Specifications to read:

“The sign mounting support channel shall be manufactured from steel or aluminum and shall be according to Standard 720001.

Steel support channels shall be according to ASTM A 1011 (A 1011M), ASTM A 635 (A 635M), ASTM A 568 (A 568M), or ASTM A 684 (A 684M), and shall be galvanized. Galvanizing shall be according to ASTM A 653 (A 653M) when galvanized before fabrication, and AASHTO M 111 (M 111M) when galvanized after fabrication. Field or post fabricated drilled holes shall be spot painted with one coat of aluminum epoxy mastic paint prior to installation.”

Revise the fifth paragraph of Article 720.02 of the Standard Specifications to read:

“The stainless steel banding for mounting signs or sign support channels to light or signal standards shall be according to ASTM A 240 (A 240M) Type 302 stainless steel.”

Revise the first sentence of the tenth paragraph of Article 720.03 of the Standard Specifications to read:

“The backs of all sign panels shall be marked in a manner designed to last as long as the sign face material, in letters and numerals at least 3/8 in. (9.5 mm) but no more than 3/4 in. (19 mm) in height with the month and year of manufacture, the name of the sign manufacturer, the name of the sign sheeting manufacturer, the method of manufacture (“screened”, “EC film”, “direct applied”, or “digital print”), and the initials IDOT.”

Revise the first sentence of the fourth paragraph of Article 1091.03(a)(10) of the Standard Specifications to read:

“Transparent colors screened, or transparent acrylic electronic cutting films, or digital printing on white sheeting, shall meet the minimum initial coefficient of retroreflection values of the 0.2 degree observation angle, -4.0 degree entrance angle values as listed in the previous tables for the color being applied.”

Add the following after the fourth paragraph of Article 1091.03(a)(10) of the Standard Specifications:

“Digitally printed signs shall be produced using digital print technologies and ink systems, products and processes that comply with the sheeting manufacturer’s recommendation. The digitally printed signs shall be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlamine shall comply with the sheeting manufacturer’s recommendations to ensure proper adhesion and transparency.”

Add the following after the third paragraph of Article 1106.01 of the Standard Specifications:

“Digitally printed signs may omit protective overlay film.”

80462

SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)

Effective: January 2, 2023

Revised: January 1, 2026

Revise the third through ninth paragraphs of Article 106.01 of the Standard Specifications to read:

“Articles, materials, and supplies shall be classified into only one of the following categories.

- (a) Iron and Steel. All iron and steel products, which are to be incorporated into the work, shall be domestically manufactured or produced and fabricated, unless an exception is expressly permitted under Federal and/or State law and written permission is given by the Department. The Contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

The applications of all coatings, epoxy, galvanizing, painting, etc. to iron and steel products shall be domestically applied.

- (b) Manufactured Products. Manufactured products shall include articles, materials or supplies that have been processed into a specific form or shape; or have been combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. Manufactured products incorporated into the work shall have the final assembly for the manufacturing process occur domestically.

A manufactured product may include components that are construction materials, iron or steel products, or exempt materials.

Precast concrete products and intelligent transportation systems (ITS) or other electronic hardware systems shall comply with the requirements of Article 106.01(a) in addition to the requirements of manufactured products.

- (c) Construction Materials. All manufacturing processes for construction materials shall occur within the United States. Construction materials shall include an article, material, or supply consisting of only one of the following.

- (1) Non-ferrous metals;

- (2) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);

- (3) Glass (including optic glass);

- (4) Fiber optic cable (including drop cable);

- (5) Optical fiber;

(6) Lumber;

(7) Drywall;

(8) Engineered wood.

Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material.

(d) Exempt Materials. Materials exempt from domestic production requirements are cement or cementitious materials, aggregates, aggregate binding agents or additives, or items not permanently incorporated into the work. Exempt materials may be combined with other materials into a final form to produce a manufactured product.”

80448

STEEL COST ADJUSTMENT (BDE)

Effective: April 2, 2004

Revised: November 1, 2025

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. The following documentation shall be furnished to the Engineer.

- (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 will be derived from submitted documentation.

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.

80127

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.
The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor's submitted DBE utilization plan.

The report shall be made through the Department's on-line subcontractor payment reporting system within 21 days of making the payment.”

80397

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor’s work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%”

80391

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”.

80463

SUBMISSION OF PAYROLL RECORDS – FEDERAL AID CONTRACT (BDE)

Effective: April 1, 2026

If the prevailing rate of wages published by the Illinois Department of Labor (IDOL) is equal to or greater than the prevailing wage determination by the United States Secretary of Labor for the same locality for the same type of construction used to classify the federal construction project, the requirements of the Illinois Prevailing Wage Act (820 ILCS 130) shall apply, including the “ILLINOIS PREVAILING WAGE ACT” section below. If not, only the requirements of the Davis-Bacon Act shall apply, including the “DAVIS-BACON ACT” section below.

DAVIS-BACON ACT. 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.”

ILLINOIS PREVAILING WAGE ACT. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

“STATEMENTS AND PAYROLLS

- (1) Prevailing Wages. All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.

(2) Payroll Records. The Contractor and each subcontractor shall make and keep, for a period of five years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, and the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employer and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department or the Department of Labor; and Federal, State, or local law enforcement agencies and prosecutors.

(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 Certified Transcript of Payroll Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at <https://labor.illinois.gov>. 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.

(4) Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

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.

80465

TRAFFIC SIGNAL BACKPLATE (BDE)

Effective: August 1, 2025

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

“Retroreflective sheeting shall be Type AZ or Type ZZ according to Article 1091.03 and applied in the preferred orientation for the maximum angularity according to the manufacturer’s recommendations.”

80470

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 1. 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.

20338

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.”

80439

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.

80302

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Revised: January 1, 2026

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports 1106.02”

Revise Article 701.03(p) of the Standard Specifications to read:

“(p) Detectable Pedestrian Channelizing Barricades 1106.02(m)”

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 the first paragraph of Section 1106.02(a) of the Standard Specifications to read:

- “(a) Lights. Lights shall meet the requirements of Chapter 13 of the “Equipment and Materials Standards of the Institute of Transportation Engineers,” 1998, Institute of Transportation Engineers, and shall be visible on a clear night from a distance of 3000 ft (900 m). Lights are classified as follows.”

Revise Articles 1106.02(g), 1106.02(k), 1106.02(l), and 1106.02(m) of the Standard Specifications 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.

- (m) Detectable Pedestrian Channelizing Barricades. The top panel or handrail shall be continuous and there should be at least a 2 in. (50 mm) gap between the hand trailing edge and its support. When visible to vehicular traffic, the top rail shall have alternating white and orange retroreflective stripes sloping at 45 degrees. The bottom panel shall be continuous and have alternating white and orange retroreflective stripes sloping at 45 degrees. Barricade stripes shall be 6 in. (150 mm) in width. The predominant color for other barricade components shall be white, orange, or silver.”

80427

WORK ZONE WIDTH RESTRICTION (BDE)

Effective: July 1, 2026

Revise the second paragraph of Article 701.06 of the Standard Specifications to read:

“Where the clear width through a work zone will be 17.5 ft (5.34 m) or less, the Contractor shall notify the Engineer at least 21 days in advance of implementing the traffic control for that restriction.”

80485

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 100 working days.

80071

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 journeyworkers 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 journeyworkers 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 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.

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.

* * * * *

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.

* * * * *

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.