036

Letting November 6, 2026

Notice to Bidders, Specifications and Proposal



Contract No. 61M82
COOK County
Section 25-00139-00-RS (Brookfield)
Route FAU 2732 (Prairie Avenue)
Project 0NQK-106 ()
District 1 Construction Funds

Prepared by	F
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. November 6, 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. 61M82
   COOK County
   Section 25-00139-00-RS (Brookfield)
   Project 0NQK-106 ()
   Route FAU 2732 (Prairie Avenue)
   District 1 Construction Funds

Resurface Prairie Ave. from Brookfield Ave. to 31st St. in the village of Brookfield. Additional work consists of sidewalk replacement, curb & gutter replacement, water main improvements, combined sewer replacement, pavement markings and lighting improvements.

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 61M82

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.

	File Name	Pg.		Special Provision Title	Effective	Revised
	80099		☐	Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2022
	80274		☐	Aggregate Subgrade Improvement	April 1, 2012	April 1, 2022
	80192		☐	Automated Flagger Assistance Device	Jan. 1, 2008	April 1, 2023
	80173	163	☒	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	
	5053I		☐	Building Removal	Sept. 1, 1990	Aug. 1, 2022
	5026I		☐	Building Removal with Asbestos Abatement	Sept. 1, 1990	Aug. 1, 2022
	80460	165	☒	Cement, Finely Divided Minerals, Admixtures, Concrete, and Mortar	Jan. 1, 2025	Jan. 1, 2026
	80384	182	☒	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	186	☒	Construction Air Quality – Diesel Retrofit	June 1, 2010	Jan. 1, 2025
	80476		☐	Deck Slab Repair	Jan. 1, 2026	
*	80029	188	☒	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	July 2, 2026
*	80486		☐	Engineer's Field Office	Nov. 1, 2026	
	80467		☐	Erosion Control Blanket	Aug. 1, 2025	
	80229		☐	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	192	☒	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	194	☒	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	196	☒	Pavement Marking	April 1, 2025	Nov. 1, 2025
	80468	197	☒	Pavement Patching	Aug. 1, 2025	
	80441	198	☒	Performance Graded Asphalt Binder	Jan 1, 2023	April 1, 2026
	80459		☐	Preformed Plastic Pavement Marking	June 2, 2024	
	3426I		☐	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2022
	80473		☐	Raised Reflective Pavement Markers	Nov. 1, 2025	
	80455	204	☒	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	206	☒	Short Term and Temporary Pavement Markings	April 1, 2024	Nov. 1, 2026
	80462	210	☒	Sign Panels and Appurtenances	Jan. 1, 2025	Jan. 1, 2026
	80479		☐	Sinusoidal Rumble Strips	Jan. 1, 2026	
	80469		☐	Slope Wall	Aug. 1, 2025	
	80448	212	☒	Source of Supply and Quality Requirements	Jan. 2, 2023	Jan. 1, 2026
	80340		☐	Speed Display Trailer	April 2, 2014	Jan. 1, 2022
	80127		☐	Steel Cost Adjustment	April 2, 2004	Nov. 1, 2025
	80480		☐	Structural Repair of Concrete	Jan. 1, 2026	
	80397	214	☒	Subcontractor and DBE Payment Reporting	April 2, 2018	
	80391	215	☒	Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019

	File Name	Pg.		Special Provision Title	Effective	Revised
	80463	216	☒	Submission of Bidders List Information	Jan. 2, 2025	Mar. 2, 2025
	80482	217	☒	Submission of Payroll Records – Federal Aid Contract	April 1, 2026	
	80437		☐	Submission of Payroll Records – State Contract	April 1, 2021	April 1, 2026
	80435	219	☒	Surface Testing of Pavements – IRI	Jan. 1, 2021	Jan. 1, 2023
	80465	225	☒	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		☐	Traffic Signal Backplate	Aug. 1, 2025	
	20338	226	☒	Training Special Provisions	Oct. 15, 1975	Sept. 2, 2021
	80429		☐	Ultra-Thin Bonded Wearing Course	April 1, 2020	Jan. 1, 2022
*	80439	229	☒	Vehicle and Equipment Warning Lights	Nov. 1, 2021	Nov. 1, 2026
	80458		☐	Waterproofing Membrane System	Aug. 1, 2024	
	80302	230	☒	Weekly DBE Trucking Reports	June 2, 2012	Jan. 2, 2025
	80454		☐	Wood Sign Support	Nov. 1, 2023	
	80427	231	☒	Work Zone Traffic Control Devices	Mar. 2, 2020	Jan. 1, 2026
	80485	234	☒	Work Zone Width Restriction	July 1, 2026	
	80071		☐	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, herein referred to as the Standard Specifications, the latest edition of the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", and the Manual of Test Procedures for Materials in effect on the date of invitation for bids, herein referred to as the Specifications, and the most recent edition of the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein which apply to and govern and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern the construction of:

PRAIRIE AVENUE IMPROVEMENTS (BROOKFIELD AVENUE TO 31ST STREET)
PROJECT NO. 0NQK(106)
SECTION NO. 25-00139-00-RS
VILLAGE OF BROOKFIELD
COOK COUNTY
CONTRACT NO. 61M82

LOCATION OF PROJECT

The project is located on Prairie Avenue from Brookfield Avenue (STA 1+04) to 31st Street (STA 46+52) in the Village of Brookfield in Cook County, Illinois. The project has a gross length of 4,548 feet (0.862 miles) and a net length of 4,548 feet (0.862 miles).

DESCRIPTION OF PROJECT

The work on the project will include installation of water main, installation of valves with valve vaults, installation of new fire hydrants and removal of existing fire hydrants, connections and disconnections, installation of brick paver sidewalk, removal and replacement of lighting, installation of pipe underdrain, earth excavation, additional streetscape improvements, replacing intermittent sections of curb and gutter, sidewalk, and driveway aprons, replacing ADA ramps, installation of curb bump-outs, point repairs to the combined sewers, installation of drainage structures, pavement patching, milling and resurfacing the pavement with hot-mix asphalt binder and surface course, pavement marking, restoration of disturbed areas along with all other incidental and collateral work required to complete the project as shown on the Plans and described herein.

PROJECT STAGING AND LOCAL ACCESS

During the construction of the project, Prairie Avenue will have varying levels of accessibility to traffic and pedestrians. The construction is planned to be broken up into three stages as laid out in the Maintenance of Traffic (MOT) Plan. The Contractor will be required to adhere to the MOT as well as the following:

Stage 1 Construction – Utility Improvements
Stage 1 consists of combined sewer point repairs, storm lateral and drainage structure replacement, water main installation via open cut and directional boring methods, water main pressure testing and chlorination, water service installation via open cut and direction boring methods, water main connections/disconnections, installation of underdrain pipe and structural soil, and other related work.

Stage 1 will be broken down into the following components:

- 1A: Combined sewer point repairs and storm lateral and drainage structure replacement
    - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 15 calendar days.
- 1B: Water main installation (Monroe Avenue – Grant Avenue) via open cut and directional boring methods and water main pressure testing and chlorination (Monroe Avenue – Lincoln Avenue)
    - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 35 calendar days.
- 1C: Water main installation (Grant Avenue – Brookfield Avenue) via open cut, water main pressure testing and chlorination (Lincoln Avenue – Brookfield Avenue), water service installation (Grant Avenue – Brookfield Avenue) via open cut and directional boring methods, installation of underdrain pipe and structural soil
    - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 25 calendar days.
    - The work performed during this stage will be completed using a detour as shown in the MOT Plan to redirect southbound traffic to Grand Boulevard from Washington Avenue to Brookfield Avenue.
- 1D: Water service installation (Grant Avenue – Monroe Avenue) via open cut and directional boring methods
    - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 25 calendar days.

- The work performed during this stage will be completed using a detour as shown in the MOT Plan to redirect southbound traffic to Grand Boulevard from Washington Avenue to Brookfield Avenue.

- 1E: Final water main connections/disconnections
  - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 5 calendar days.
  - The work performed during this stage will be completed using a detour as shown in the MOT Plan to redirect southbound traffic to Grand Boulevard from Washington Avenue to Brookfield Avenue.

Stage 2 Construction – Concrete, lighting, and Streetscape Improvements
Stage 2 consists of removal and replacement of sections of curb and gutter, sidewalk, driveway aprons, concrete base course and concrete pavement, structure adjustments within the curb line, removal of existing light poles and hand holes, installation of new light poles and associated lighting infrastructure, streetscape improvements including brick paver sidewalk and tree grates, and other related work.

Stage 2 will be broken down into the following components:

- 2A: Concrete improvements from 31st Street to Monroe Avenue including replacement of sections of curb and gutter, sidewalk, driveway aprons, and concrete pavement and structure adjustments within the curb line
  - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 25 calendar days.
- 2B: Lighting improvements from Brookfield Avenue to Washington Avenue including removal of existing light poles, handholes, and cabinets, installation of proposed lighting controller, conduit, hand holes, light pole foundations, decorative pedestrian and roadway poles, and other related work.
  - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 30 calendar days.
- 2C: Concrete and streetscape improvements from Grant Avenue to Brookfield Avenue including replacement of sections of curb and gutter, sidewalk, driveway aprons, and concrete pavement, structure adjustments within the curb line, and installation of concrete base course, brick paver sidewalk, and tree grates
  - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 35 calendar days.
  - The work performed during this stage will be completed using a detour as shown in the MOT Plan to redirect southbound traffic to Grand Boulevard from Washington Avenue to Brookfield Avenue.

- 2D: Concrete improvements from Grant Avenue to Monroe Avenue including replacement of sections of curb and gutter, sidewalk, driveway aprons, and concrete pavement and structure adjustments within the curb line
    - Once the Contractor begins removals for any portion of this stage, the improvements and restoration work shall be completed within 25 calendar days.
    - The work performed during this stage will be completed using a detour as shown in the MOT Plan to redirect southbound traffic to Grand Boulevard from Washington Avenue to Brookfield Avenue.

Stage 3 Construction – Paving Improvements
Stage 3 consists of milling of the existing pavement, pavement patching as may be necessary, installation of HMA binder course, structure adjustments within the pavement, installation of HMA surface course, installation of pavement markings, and other related work.

Stage 3 will be broken down into the following components:

- 3A: Milling of existing pavement, pavement patching as needed, and installation of HMA binder course
    - Once milling has started, the Contractor shall install the HMA binder course within 7 calendar days. If the Engineer has determined that pavement patching is required, the Contractor will have an additional 7 calendar days for a total of 14 calendar days from pavement milling to remove and replace the pavement and install the HMA binder course.
- 3B: Adjustment of structures within the pavement, installation of HMA surface course, and installation of pavement markings
    - Once the HMA surface course has been completed in any area, the pavement markings shall be installed within 7 calendar days.

Traffic Detour:
Several stages of work require the use of a detour as shown in the MOT Plan to redirect southbound traffic to Grand Boulevard from Washington Avenue to Brookfield Avenue. The Contractor shall schedule the work, so these stages are completed concurrently to limit the amount of time that the detour is required. Once the traffic detour has been put into place, the Contractor shall complete all work requiring detouring within 75 calendar days. In no cases shall the detour extend past 75 calendar days without written consent from the Engineer.

Riverside-Brookfield High School:
While school is in session at Riverside-Brookfield High School, the Contractor shall only work within the Washington Avenue intersection between the hours of 9:00 and 3:00PM. At 3:00PM

each day, the Contractor will be responsible for preparing the work zone and traffic control to make the area available to all pedestrians and vehicles to have access to the school.

MAINTENANCE OF ROADWAYS (D-1)

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.

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

Conflict(s) noted below have been identified by following the suggested staging plan included in the contract. The company has been notified of the conflict(s) 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 adjust, relocate, or complete new installations as noted below; this work has been deemed necessary to be complete for the Department's contractor to then work in the stage under which the item has been listed.

Pre-Stage

Stage/Location	Type	Description	Responsible Agency	Duration of Time
1+50 – 3+25 (west sidewalk)	Relocation	Gas Main Relocation	Nicor	15 days
1+50 – 3+25 (east sidewalk)	Relocation	Gas Main Relocation	Nicor	15 days

Stage 1
No conflicts to be resolved

Stage 2

Stage/Location	Type	Description	Responsible Agency	Duration of Time
3731 Prairie Avenue	Transfer	Transfer power to lighting controller	ComEd	1 Day
6+60 (South east parkway of Prairie Avenue and Grant Avenue	Light Pole	Pole to be removed	ComEd	1 Day
8+42 (West parkway of Prairie Avenue)	Light Pole	Pole to be removed	ComEd	1 Day
10+45 (East parkway of Prairie Avenue)	Light Pole	Pole to be removed	ComEd	1 Day
17+25 (West parkway of Prairie Avenue)	Light Pole	Pole to be removed	ComEd	1 Day
20+05 (South east parkway of Prairie and Washington Avenue)	Light Pole	Pole to be removed	ComEd	1 Day

Stage 3
No conflicts to be resolved

Pre-Stage: 30 Days Total Installation
Stage 1: 0 Days Total Installation

Stage 2: ____6___ Days Total Installation
Stage 3: ____0____ Days Total Installation

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

Agency/Company Responsible to Resolve Conflict	Name of Contact	Address	Phone	Email Address
AT&T	Tom Laskowski	1000 Commerce Drive, Oak Brook, IL 60523	(630)-573-5643	g05256@att.com tl7895@att.com
Comcast	Martha Gieras	688 Industrial Drive Elmhurst, IL 60126	(224)-229-5862	martha_gieras@cable.comcast.com
ComEd	Christian Chajon	Three Lincoln Centre, Suite 600 Oakbrook Terrace, IL 60181	(708)-208-9758	Christian.Chajon@ComEd.com
Lumen	Katherine Waltz	100 Centurylink Drive Monroe, LA 71203	(312)-253-1800	kwaltz@hbkengineering.com
Nicor	Karey Johnson	1844 Ferry Road Naperville, IL 60563	(224)-471-9356	karejohn@southernco.com
Verizon	Joe Chaney	1701 Golf Road Tower 3, Suite 109 Rolling Meadows, IL 60008	(312)-617-2131	joe.chaney@verizon.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 for notifying the owner in advance of the work to take place so necessary staffing on the owner's part can be secured.

Pre-Construction Stage
No facilities requiring extra consideration

Stage 1

There is an existing gas main that runs along the face of the sidewalk in close proximity to the proposed utility improvements from station 1+50 to 6+70 on the east and west side of the street. Caution should be exercised when excavating near these gas mains, and Nicor should be contacted prior to construction for a site coordination meeting.

Stage 2
No facilities requiring extra consideration.

Stage 3
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	Address	Phone	Email Address
AT&T	Tom Laskowski	1000 Commerce Drive, Oak Brook, IL 60523	(630)-573-5643	g05256@att.com tl7895@att.com
Comcast	Martha Gieras	688 Industrial Drive Elmhurst, IL 60126	(224)-229-5862	martha_gieras@cable.comcast.com
ComEd	Christian Chajon	Three Lincoln Centre, Suite 600 Oakbrook Terrace, IL 60181	(708)-208-9758	Christian.Chajon@ComEd.com
Lumen	Katherine Waltz	100 Centurylink Drive Monroe, LA 71203	(312)-253-1800	kwaltz@hbkengineering.com
Nicor	Karey Johnson	1844 Ferry Road Naperville, IL 60563	(224)-471-9356	karejohn@southernco.com
Verizon	Joe Chaney	1701 Golf Road Tower 3, Suite 109 Rolling Meadows, IL 60008	(312)-617-2131	joe.chaney@verizon.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 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.

PLANS AND SPECIFICATIONS

The Contractor shall keep on the project site a copy of the Specifications and Plans. Anything mentioned in the Specifications and not shown on the Plans, or anything shown on the Plans and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both. In any case of discrepancy in the figures or drawings, the matter shall be immediately submitted to the Engineer without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

EROSION AND SEDIMENT CONTROL PLAN

Prior to any soil/pavement disturbance, inlet filter assemblies shall be installed as shown on plans.

The inlet filter assembly shall be approved by the Engineer or Village prior to ordering and installation. The inlet filter shall be inspected weekly and after a 0.5-inch rain event by the Engineer. The Engineer will report any issues, via verbal or written communication, that need to be addressed by the Contractor.

Maintenance of the proposed inlet filter will be per manufacture recommendations and will be done by the Contractor. Typical maintenance practices include inspection after a runoff event, sediment removal at 50% capacity, and repairs/replacement as needed.

Inlet filters shall be paid for at the Contract unit price per Each for INLET FILTERS.

Prior to any concrete installation, concrete washout boxes shall be installed as shown on plans.

Concrete washout boxes, whose primary purpose is to store solids and prevent concrete liquid runoff, required for this project will be a minimum of 10 feet by 10 feet in size. The concrete washout box will be installed and built per the Illinois Urban Manual.

The concrete washout boxes shall be approved by the Engineer or Village. The inlet filter shall be inspected prior to and after every concrete pour. The Engineer will report any issues, via verbal or written communication, that need to be addressed by the Contractor.

Maintenance of the concrete washout boxes will be done by the Contractor. Typical maintenance practices include removing solids once washout box becomes two-thirds full, replacing damaged liner, and reconstructing the concrete washout box.

All costs to install, maintain and remove the concrete washout boxes shall be included in the cost of the Contract.

UNCONTAMINATED SOIL CERTIFICATION

An Uncontaminated Soil Certification (LPC-663) is provided within these Special Provisions and a copy of the Uncontaminated Soil Certification Report is available as outlined in the Available Reports section.

If the contractor chooses to dispose of the excavated material at more than one CCDD facility, then any additional costs shall also be borne by the contractor.

Should any contaminated material be discovered on the project, the additional costs for testing and proper disposal of the contaminated material shall be paid for under Section 669 of the Standard Specifications.

CURB AND GUTTER TRANSITIONS

Transitions from the proposed curb and gutters to the depressed curb and gutters, proposed curb and gutters to existing curb and gutters, and from curb of variable heights shall be done in ten (10) foot transitions unless otherwise directed by the Engineer.

This item will not be paid for separately but will be included in the unit price for the various concrete items in the Contract.

OPEN EXCAVATIONS

Leaving of any excavation open overnight will not be allowed on this project. The Contractor will be responsible for completely backfilling or plating over of all excavations at the end of each day. If the excavations are backfilled, they shall be filled with an aggregate meeting the gradation of CA-6. The material will be compacted sufficiently to prevent rutting or settlement of material under traffic loads. If plates are used, they shall be of sufficient thickness to support vehicular loads and they shall extend a minimum of twelve inches (12") beyond the limits of the excavation on all sides. If the plates are to be left over the weekend, the edges of the plates shall be cushioned with a bituminous mixture in areas where vehicular traffic will cross the plates.

All excavated and other materials that are to be reused shall be piled so as not to endanger the work and so that free access may be had at any time to all parts of the work, and shall be kept neatly piled so as not to inconvenience public travel or adjoining tenants. Walkways shall be kept clear and unobstructed. All excess excavated material shall be immediately removed and disposed of off the job site by the contractor.

The costs for providing the aggregate, plates and bituminous mixture will not be paid for directly but shall be considered included in the cost of the excavation work required for the various contract items.

LAYING OF PIPE

Proper implementations, tools, and facilities satisfactory to the Engineer shall be utilized by the Contractor for the safe and efficient execution of the work. All pipe, fittings, valves, hydrants and accessories shall be carefully lowered into the trench using suitable equipment in such a manner as to prevent damage to pipe and fittings. Under no circumstances shall the pipe or accessories be dropped or dumped into the trench.

The water main shall be either plugged or capped with a "water-tight" fitting at the end of each work day, to prevent the entry of foreign materials into the pipe system. All labor and materials required for this precautionary measure shall be considered incidental to the project.

DUCTILE IRON PIPE WATER MAINS

Water main shall be installed in accordance with Section 41 of the "Standard Specifications for Water & Sewer Main Construction in Illinois". All Ductile Iron Pipe water mains shall be Class 52, cement-lined and zinc coated, meeting the requirements of Specifications ANSI/AWWA C151/A21.51 with "push-on" joints meeting the requirements of Specifications ANSI/AWWA C111/ A21.11. Where specified on the plans, or in these Specifications, mechanical joints and "Lock-Type" joints shall be used in lieu of "push-on" joints.

METALLIC ZINC COATING FOR DUCTILE IRON PIPE

The metallic zinc coated pipe installed on this project shall consist of arc-applied or paint-applied, 99.99% pure zinc coating, having a mass of 200 grams per square meter with a finished layer of standard bituminous paint topcoat in accordance with AWWA C151. The material shall comply with ISO 8179 for zinc coatings. Minor scratches in the coating caused by handling are deemed acceptable, however larger areas shall be repaired by field application of zinc-rich paint, following ISO 8179 standards.

PIPE FITTINGS AND SPECIAL CASTINGS

All pipe fittings and special castings shall be ductile iron conforming to ANSI/AWWA C153/A21.53 and ANSI/AWWA C111/A21.11 specifications and shall meet the minimum requirements of Class 150 Ductile Iron Pipe. If certain fittings are not manufactured in ductile iron, cast iron fittings shall be acceptable. Mechanical joint type fittings shall be used.

POLYETHYLENE ENCASEMENT

All proposed ductile iron pipe water main will be encased with V-Bio Enhanced Polyethylene Encasement (Polywrap) for corrosion protection. All fittings and water main installed using the horizontal directional drilling method shall be encased in a double layer of polyethylene tubing. The polyethylene material shall be manufactured and installed in compliance with ANSI/AWWA C105/A21.5. The encasement film shall consist of three (3) layers of co-extruded linear low-density polyethylene fused into a minimum 8 mil single thickness. The wrap shall overlap a minimum of one foot (1') at joints and secured tightly in place around the pipe. All proposed water services shall be encased in polyethylene tubing for a minimum distance of three feet (3') from the proposed water main.

SHUTDOWNS AND WATER SERVICE TRANSFERS

The Public Works Department shall be given two (2) days advance notice of any work to be done by the Contractor that will involve the Village's existing water system. The Village Water Department's approval must be obtained prior to any such work being undertaken by the

Contractor and water service installation and connections shall be in accordance with section 41-2.11 – 41-2.13 of the "Standard Specifications for Water and Sewer main Construction in Illinois" and well as the Illinois State Plumbing Code.

The Village Water Department will offer assistance in any necessary shut downs of existing water mains; however, it will be the Contractor's responsibility to provide the necessary labor and equipment for making these shut downs.

The Contractor shall have all necessary materials and equipment on hand at the locations of water service transfer or water main connections before the water services are cut or shut downs are made. The Contractor shall coordinate with the Engineer and the Village on the time and duration of the shutdown. Once the shutdown is made, the Contractor shall continue work until the valve and fittings necessary have been installed and the existing water mains can be placed back into service, regardless of the actual duration of the shutdown. The shutdown period for relocating a water valve shall not exceed four (4) hours. The shut-down period for replacing and relocating fire hydrants shall not exceed six (6) hours. No individual section of water main that provides service to residents shall be shut down more than twice due to construction operations during the project.

DISINFECTION OF WATER MAINS

After satisfactorily passing the pressure test, newly installed water mains shall be disinfected in basic accordance with Section 41-2.15 of the Standard Specifications for Sewer & Water Main Construction in Illinois.

The pipe shall be flushed to remove any solids or contaminated material that may have become lodged in the pipe. The flow velocity of the water in the pipe during the flushing shall be a minimum of 2.5 feet per second. A 2 ½" hydrant port will, under normal pressures, provide this velocity in pipe sized up to and including twelve inches (12").

Newly installed water mains shall be chlorinated so that the initial chlorine residual is not less than fifty (50) mg/L and that a chlorine residual of not less than twenty-five (25) mg/L remains in the water after standing in the pipe for at least twenty-four (24) hours.

All valves, fire hydrants, and other appurtenances shall be operated while the highly chlorinated water is being retained in the water main for the twenty-four (24) hour period to ensure chlorination of the appurtenances.

Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipe at its extremity until the replacement water throughout its lengths show upon test a chlorine residual not in excess of that carried in the system. This highly chlorinated water shall be flushed into sanitary sewers or combined sewers. If it is not practical to flush into a sanitary sewer or combined

sewer, then an adequate amount of reducing agent shall be applied to the water being disposed of in order to thoroughly neutralize the chlorine residual remaining in the water.

Representative samples will be collected at locations as directed by the engineer and will be analyzed for bacteriological contamination at a laboratory certified by the Illinois Department of Public Health. Satisfactory disinfection is demonstrated when two (2) consecutive water samples, collected at least twenty-four (24) hours apart, indicate no bacterial contamination.

Should the chlorination fail to result in approval, the chlorination procedures shall be repeated until satisfactory results are obtained. Sampling taps shall not be paid for as a separate item but shall be included in the cost of the respective items for GATE VALVES.

ABANDONING EXISTING VALVE BOXES AND WATER SERVICE BOXES

The installation of the new sections of water main and water services will allow for certain valve boxes and water service boxes to be abandoned. The Contractor will cut off the stem of the box approximately twelve inches (12”) below grade and will fill the remaining portion of the valve box or water service box with crushed stone, gradation CA-6, or with screenings. This work will not be paid for separately but will be considered incidental to the Contract.

SHEETING AND SHORING

Any sheeting or shoring required for the storm sewer installation or other construction elements requiring relatively deep excavations shall be included in the particular pay item and no additional compensation will be allowed for any supplemental work associated with the maintenance of trench sides or other excavated areas.

CURING AND PROTECTION

After the concrete has been finished and the water sheen has disappeared from the surface of the concrete, the surface shall be sealed with membrane curing compound of a type approved by the Engineer. The seal shall be maintained for the specified curing period. The edges of the concrete shall also be sealed immediately after the forms are removed. In addition, all concrete placed during periods of cold weather shall be protected in accordance with Article 720.13 of the Standard Specifications. This work shall be considered included in the cost of the various concrete items in the Contract.

The work shall be under the charge and care of the Contractor until final acceptance by the Engineer as coordinated with the Village. The Contractor shall assume all responsibility for any injury or damage to the work from any cause whatsoever and he shall rebuild, repair or restore the damaged work at his own expense.

This item will not be paid for separately but will be included in the unit price for the various concrete items in the Contract.

SPRINKLER SYSTEMS

The Village will pass out a letter requesting that all residents with sprinkler systems in the parkway shall notify the Village prior to construction. The Village will then mark the sprinkler heads on these systems. The Contractor will be responsible for all costs for repairing any damage that is done to existing sprinkler systems that have been located by the Village prior to the damage being done.

AGGREGATE BEDDING FOR CONCRETE WORK

New sidewalk and curb & gutter shall be placed on a minimum of two inches (2") of compacted CA-6 stone bedding or Subbase Granular Material, Type B, in the proposed areas. New driveway pavement, 8" concrete pavement, Class C patching, and Class D patching shall be placed on a minimum of four inches (4") of compacted CA-6 stone bedding.

Additional aggregate required to adjust the existing elevation of the subgrade to the proposed elevation will be included as part of that pay item.

This item will not be paid for separately but will be included in the unit price for the respective concrete items in the contract.

MAINTENANCE OF EXISTING DRAINAGE STRUCTURES

All loose material deposited in the flow line of gutters and drainage structures that obstructs the natural flow of water shall be removed at the close of each working day. At the conclusion of the construction operations, all drainage facilities shall be clean and free of all obstructions due to construction operations.

This item will not be paid for separately but shall be included in the unit price for the various sewer structures in the contract.

EARTH EXCAVATION

This item includes the excavating and grading work necessary on this Project to establish the subgrade elevations of the proposed volume to be filled with structural soil and any proposed pavements to be constructed as indicated on the Plans. The work shall be performed in accordance with Section 202 of the "Standard Specifications for Road and Bridge Construction".

For the volumes to be filled with structural soil this item includes all the excavating and grading

work necessary to establish the subgrade elevations of the proposed volume other than that excavation required as part of the item for PIPE UNDERDRAINS, TYPE 1, 6".

Any excavation of the parkway which is required to give a uniform slope from the edge of sidewalk to the top of the curb shall also be paid for under this item. The payment for EARTH EXCAVATION will only be applicable where the proposed top of curb has been lowered substantially from the existing grade (four inches or greater), and a uniform parkway slope is unattainable through the basic grading operations of top-soil placement. The excavation for the proposed sodding and topsoil section will be subtracted from the measured volume to be excavated. Any excavation and grading of the parkway where the top of curb has not been lowered by four inches or greater shall be included in the item for TOPSOIL FURNISH AND PLACE, 4".

Also included in the work under this item are the removal and disposal of all brush, rock, construction debris, hedges, trees of sizes less than 6" in diameter, and other excess materials located within the construction area of the Project's improvements.

Basis of Payment: This work will be paid for at the Contract unit price per Cubic Yard for EARTH EXCAVATION.

TRENCH BACKFILL

All trench backfill used under or within two feet (2') of pavements, sidewalks, driveways, and curb and gutter shall be Crushed Stone, Gradation CA-6. Maximum compaction must be obtained by Method 1 (mechanical compaction) as described in Article 550.07 of the "Standard Specifications for Road and Bridge Construction". In certain locations such as around structures where it is difficult to obtain compaction via mechanical means, the Engineer may allow or require jetting.

The crushed stone used for trench backfill must be approved on the Project by the Engineer. The use of crushed concrete will not be allowed. Payment for this item will be based on actual in place measurements taken by the Engineer on the site but in no case will it exceed the theoretical volume. Payment width will be based on the size of the installed pipe and payment depth will be from twelve inches (12") above the top of pipe to the surface of the roadway.

Trench backfill shall be placed so the top of the trench is the same elevation as the adjacent pavement. Once the proposed pavement is ready to be constructed, the trench backfill will be removed and graded to the appropriate elevation for the new pavement to be installed. The depth of removal will vary based on the proposed pavement material but is anticipated to be eleven and a half inches (11.5") at locations with Class C Patches and nine and a half inches (9.5") at locations with Class D Patches. Removal of trench backfill material and grading in preparation for proposed pavement will be included in this item.

Basis of Payment: This work will be paid for at the Contract unit price per Cubic Yard for TRENCH BACKFILL

TOPOSIL FURNISH AND PLACE, 4”

This item shall include the furnishing and placement of four inches (4”) of topsoil on all landscaped areas disturbed by construction as shown on the Plans and directed by the Engineer, except for where a different thickness has been specified.

The Contractor shall take precautions so as not to unnecessarily damage lawns. In areas that are designated to be sodded, the existing sod shall be cut and removed; the area shall then be shaped, graded and rototilled. The areas of excavation adjacent to new concrete shall be compacted to the satisfaction of the Engineer. The area to be sodded shall then have a layer of good quality, pulverized topsoil which has been approved by the Engineer prior to placement, spread and fine raked in such a manner as to result in a top dressing of the parkway having an average thickness of four inches (4") of topsoil. Any excavation and grading of the parkway which is required to give a uniform slope from the limit of sod restoration to the top of the curb shall be included in this item, wherever the top of curb is not substantially lowered. If the proposed top of curb is substantially lowered (three inches or greater), then payment shall be made for the grading and removal of the parkway under the item EARTH EXCAVATION. Unless otherwise directed by the Engineer, the topsoil and sod shall be placed after the installation of the binder course and before the installation of the hot-mix asphalt surface course.

The Contractor shall be responsible for weed prevention and removing any weeds prior to the placement of the sod. The Contractor will be responsible for keeping all weeds under 6” in height and will be responsible for mowing weeds within 72 hours of notice from the Engineer. If proper measures are not met by the Contractor to control weeds, then the Village reserves the right to correct this issue at the expense of the Contractor. The method of weed control and weed removal must be approved by the Engineer. Before sod is placed the topsoil shall be rototilled by the Contractor and all weeds removed from topsoil. Sod installation will not be paid for unless topsoil is approved by the Engineer prior to sod placement. All weed control and weed removal shall be included in the cost of this item.

The topsoil and subgrade shall be thoroughly compacted along newly installed concrete by a compaction method approved by the Engineer.

Basis of Payment: This item shall be at the Contract unit price per Square Yard for TOPSOIL FURNISH AND PLACE, 4”.

TOPSOIL FURNISH AND PLACE, 12”

This item shall include the placement of twelve inches (12”) of topsoil on certain landscaped areas disturbed by construction as directed by the Engineer.

It is anticipated that these areas may include sections of parkway where the existing asphalt and underlying base are to be removed, excavated, restored with the specified twelve-inch (12”) thickness of topsoil, and placement of sod.

The construction and payment of this item shall be the same as TOPSOIL FURNISH AND PLACE, 4” except for the designated difference in the depth of the topsoil.

Basis of Payment: This work will be paid for at the Contract unit price per Square Yard for TOPSOIL FURNISH AND PLACE, 12”.

INLET FILTERS

This item shall include the furnishing, installation, and removal of a drainage structure inlet filter assembly, consisting of a frame and filter bag, to collect sediment in surface stormwater runoff at locations shown on the Plans or as directed by the Engineer be in accordance with Section 280 of the Standard Specifications and the details on the Plans.

The inlet filter shall be inspected weekly and after a 0.5 inch or larger rain event by the Engineer. The Engineer will report any issues, via verbal or written communication, that need to be addressed by the Contractor. All issues presented shall be addressed and corrected within twenty-four (24) hours of notice.

Cleaning of the filter bags shall be included in this item. The cleanings shall be performed weekly, or as needed to keep the bags from reaching 75% of their storage capacity, for the duration of the use of each drainage structure inlet filter assembly. The Engineer shall be the sole judge of the need for cleaning, based on the rate that debris and silt is collected at each location. Also included shall be the off-site disposal of the material which is removed from the bags.

Basis of Payment: The work will be paid for at the Contract unit price per EACH for INLET FILTERS.

PORTLAND CEMENT CONCRETE BASE COURSE, 4”

This item shall include the placement of a four-inch (4”) Portland Cement Concrete base course at locations shown on the plans or as directed by the Engineer. The work shall be performed in accordance with Section 353 of the “Standard Specifications for Road and Bridge Construction”.

Brick pavers will be placed on a prepared 4" concrete base course. The work shall be performed in accordance with Section 353 of the "Standard Specifications for Road and Bridge Construction". The surface of the concrete base shall be three and one quarter inches (3 ¼") beneath the finished paver grade to allow sufficient room for the brick pavers to be placed. The concrete base course shall be placed upon a cushion of compacted crushed stone, Gradation CA-6, having a minimum thickness of four inches (4"). One inch (1") holes shall be drilled through the concrete base course into the aggregate to provide for drainage as shown in the Plan details or directed by the Engineer. The cost for this work shall be paid under this item.

Basis of Payment: The work will be paid for at the Contract unit price per Square Yard for PORTLAND CEMENT CONCRETE BASE COURSE, 4".

HOT-MIX ASPHALT SURFACE REMOVAL – BUTT JOINT

This item will consist of the removal of the existing hot mix asphalt surface necessary to provide the profile of the proposed pavement cross section within the butt joint areas on the project. The asphalt pavement areas will be milled to allow for 2" of HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50.

This item shall include the shaping and compacting of any aggregate base that is exposed during grinding operations. Sufficient milling or grinding passes shall be made over the existing pavement so that all irregularities and high spots are eliminated from the pavement's surface before it is overlaid with new material. All butt joints are included under this pay item and shall be saw-cut no more than twenty-four (24) hours prior to the placement of the bituminous surface.

The equipment and construction methods for this item will conform to Article 440.03 of the Standard Specifications for Road and Bridge Construction. Hot-Mix Asphalt Surface Removal shall be measured in place and the area computed in square yards for the total increment of material removed. The area measured shall be paid for only once regardless of the number of passes needed to remove the material.

Basis of Payment: This work will be paid for at the Contract unit price per Square Yard of HOT-MIX ASPHALT SURFACE REMOVAL – BUTT JOINT.

INCIDENTAL HOT-MIX ASPHALT SURFACING

This item shall be installed in areas where hot-mix asphalt surface not part of the street pavements is to be replaced as part of the project or as directed by the Engineer. The hot-mix asphalt surface course shall be installed with a thickness of three-inches (3"). The surface course shall be placed in accordance with Section 408 of the "Standard Specifications for Road and Bridge Construction".

The material shall be as shown in the paving mix chart on the plans.

The removal of the existing surface, preparation of the base, and the addition of any aggregate base shall be paid for under the item for HOT-MIX ASPHALT DRIVEWAY PAVEMENT REMOVAL.

Basis of Payment: The work will be paid for at the Contract unit price per Ton for INCIDENTAL HOT-MIX ASPHALT SURFACING.

PROTECTIVE COAT

This item will include the placement of protective coat on all exposed concrete surfaces at locations shown on the Plans or as directed by the Engineer. Regardless of when the concrete is placed, a protective coat shall be applied to all concrete curb and gutter, driveways, concrete pavement, and sidewalks in accordance with the requirements of Article 420.21 of the "Standard Specifications for Road and Bridge Construction".

Two complete applications will need to be made prior to payment being made.

Basis of Payment: The work will be paid for at the Contract unit price per Square Yard of PROTECTIVE COAT.

DETECTABLE WARNINGS

This item shall include the placement of detectable warnings at locations shown on the Plans or as directed by the Engineer. This item shall be installed simultaneously with PORTLAND CEMENT CONCRETE SIDEWALK, 5".

Work shall be performed according to the Americans with Disabilities Act (ADA), Public Right-of-Way Accessibility Guidelines (PROWAG), IDOT Standard 424001-12, as well as Article 424 of the Standard Specifications.

The detectable warning shall be Vitrified Polymer Composite, Cast in Place, Detectable/Tactile Warning Surface Tile. The tile shall be "brick red" in color and 24" x 60" in size or as needed as directed by the Engineer.

The composite paver tile used in this project shall be manufactured by ADA Solutions, Inc. (www.ADATILE.com), Armor-Tile, or Tuff-Tile. The paver tiles shall be installed according to the manufacturer's installation procedures.

This item shall not be a "Surface-Applied" product.

Immediately following the installation of PORTLAND CEMENT CONCRETE SIDEWALK, 5", the detectable warning shall be pressed into the concrete. The detectable warning shall be tamped with a vibrating mechanism upon installation, and the factory-installed plastic sheeting must remain in place during the entire installation process to prevent the splashing of concrete onto the finished surface of the tile. No concrete shall be removed in the area to receive the detectable warning to ensure a strong lock with the concrete. The top of the domes shall be set level to the adjacent concrete on the top and sides of the ramp. This item shall be installed in full accordance with the manufacturer's recommendations.

Basis of Payment: The work will be paid for at the Contract unit price per Square Foot of DETECTABLE WARNINGS.

PAVEMENT REMOVAL

This item shall include the removal of existing concrete alley returns, concrete pavement or concrete pavement overlaid with asphalt in order to allow for the construction of proposed street pavements and alley returns. The work shall be performed in accordance with Section 440 of the "Standard Specifications for Road and Bridge Construction".

This item shall include removal of the pavement and any additional excavation to reach the proposed subgrade.

All pavement removal areas shall be saw-cut full depth along their perimeter prior to the removal of the pavement. The use of drop hammers will not be allowed for breaking these pavements.

Basis of Payment: The work will be paid for at the Contract unit price per Square Yard for PAVEMENT REMOVAL.

DRIVEWAY PAVEMENT REMOVAL

This work shall be done in accordance with Section 440 of the Standard Specifications with the exception that it will also include the removal of concrete, brick, block, aggregate, flagstone, and bituminous driveway pavements.

The use of drop hammers will not be allowed for breaking these pavements. The driveways shall be excavated to the subgrade of the proposed driveway, which shall be included in this item. At locations that proposed driveway pavement is indicated on the plans where none currently exists, the excavation for the proposed driveway pavement shall be paid for under this pay item. All driveway pavement removal areas shall be saw-cut full depth along their perimeter prior to the removal of the driveway pavement.

Basis of Payment: The work will be paid for at the Contract unit price per Square Yard for

DRIVEWAY PAVEMENT REMOVAL.

COMBINATION CURB AND GUTTER REMOVAL

This item shall include the removal of the existing combination curb and gutter at locations indicated on the Plans or as directed by the Engineer. The work shall be performed in accordance with Section 440 of the "Standard Specifications for Road and Bridge Construction".

Included in this item is the removal of all types of curb encountered on the Project. This includes but is not limited to barrier curb. Also included in this item is the removal and disposal of any asphalt that has been overlaid into the gutter of any curb that is designated for removal. This item shall also include any excavation beneath or behind the curb and gutter necessary to install the proposed curb and gutter, including a minimum of two inches (2") below the proposed curb and gutter to allow for compacted crushed stone bedding, Gradation CA-6.

A full-depth saw-cut shall be made six inches (6") from the edge of pavement for the entire length of curb and gutter removal to allow for the neat removal of the curb and gutter and the placement of a gutter board in forming for the new curb. The removal of the six-inch (6") wedge in front of the curb and gutter shall be included under this item. The depth of removal for the wedge shall match the depth of the curb and gutter.

All removal shall terminate at existing expansion joints or at saw-cut lines as determined by the Engineer. The existing pavements abutting the curb and gutter shall be protected while removal work is being done to avoid unnecessary pavement restoration. Any restoration to repair damaged pavement shall be paid for at the contractor's expense.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of COMBINATION CURB AND GUTTER REMOVAL.

SIDEWALK REMOVAL

This item shall include the removal of sidewalk at locations shown on the Plans or as directed by the Engineer. The work shall be performed in accordance with Section 440 of the "Standard Specifications for Road and Bridge Construction".

The removal of concrete, brick, flagstone and hot-mix asphalt sidewalks shall all be included in this item. These sidewalks shall be excavated to the subgrade of the proposed sidewalk, including the two inch (2") crushed stone cushion, which shall be included in this item. At locations that proposed sidewalk is indicated on the Plans where none currently exist, the excavation for the proposed sidewalk shall be paid for under this pay item.

At locations where the sidewalk is required to be lowered by an amount greater than three inches

(3") the material removed shall be included in the item for EARTH EXCAVATION. Grading changes less than three inches (3") shall be included in this item.

Basis of Payment: The work will be paid for at the Contract unit price per Square Foot of SIDEWALK REMOVAL.

STORM SEWERS, CLASS B, TYPE 2, 10"

This item shall include the storm sewer that connects drainage structures to other drainage structures and to the existing sewer system. In those locations indicated on the Plans, polyvinyl chloride (PVC) sewer pipe of the size indicated shall be installed. The pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

All pavement removal, excavation, and removal of existing pipe shall be included under this item. The pipe bedding and backfill to twelve inches (12") above the top of pipe will also be included in this item. Pipe bedding and backfill shall be Gradation CA-7.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of STORM SEWER, CLASS B, TYPE 2, 10".

STORM SEWERS, CLASS B, TYPE 2, 12"

This item shall include the storm sewer that connects drainage structures to other drainage structures and to the existing sewer system. In those locations indicated on the Plans, polyvinyl chloride (PVC) sewer pipe of the size indicated shall be installed. The pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

All pavement removal, excavation, and removal of existing pipe shall be included under this item. The pipe bedding and backfill to twelve inches (12") above the top of pipe will also be included in this item. Pipe bedding and backfill shall be Gradation CA-7.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of STORM SEWER, CLASS B, TYPE 2, 12".

DUCTILE IRON WATER MAIN 6”

This item shall include the installation of six-inch (6") water main at the locations shown on the Plans. The pipe material shall be Ductile Iron Pipe, Class 52, cement-lined and zinc coated with a finished bituminous paint layer, meeting the requirements of Specifications ANSI/AWWA C151/A21.51 with “push-on” joints meeting the requirements of specifications ANSI/AWWA C111/A21.11. Pipe installation shall be in accordance with Section 41 of the "Standard Specifications for Water and Sewer Main Construction in Illinois" and the Standard Specifications.

The work shall include excavating the trench, disposing of the excavated materials, furnishing and placing the pipe, furnishing and installing the V-Bio Polyethylene Encasement around the pipe, and furnishing and placing the bedding material under and to twelve-inch (12") above the pipe. This item shall include all costs for furnishing the labor, material, and equipment necessary to install the pipe at the proper line and grade in accordance with the details shown on the plans and as described in the Specifications.

The Contractor shall properly install and compact the materials placed into the trench after the installation of the water main, and this work shall be included under the item for TRENCH BACKFILL.

Basis of Payment: This item shall be paid for at the Contract unit price per Foot for DUCTILE IRON WATER MAIN 6”.

DUCTILE IRON WATER MAIN 8”

This item shall include the installation of eight-inch (8") water main at the locations shown on the Plans. The construction and payment for this item shall be the same as the DUCTILE IRON WATER MAIN 6” except for the designated difference in the size of the pipe.

Basis of Payment: This item shall be paid for at the Contract unit price per Foot for DUCTILE IRON WATER MAIN 8”.

DUCTILE IRON WATER MAIN 16”

This item shall include the installation of sixteen-inch (16") water main at the locations shown on the Plans. The construction and payment for this item shall be the same as the DUCTILE IRON WATER MAIN 6” except for the designated difference in the size of the pipe.

Basis of Payment: This item shall be paid for at the Contract unit price per Foot for DUCTILE IRON WATER MAIN 16”.

FIRE HYDRANTS TO BE REMOVED

This item shall include the removal of existing fire hydrants that will not be replaced as shown on the Plans and as directed by the Engineer. The existing fire hydrant can be broken off a minimum of 12" below the ground surface and filled with stone or otherwise cut and sealed. The auxiliary valve box must be removed. **Fire hydrants are to be removed only after the existing water main has been abandoned.**

Basis of Payment: This item shall be paid for at the Contract unit price per Each for FIRE HYDRANTS TO BE REMOVED.

FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX

This item shall include installation of new fire hydrants as shown on the Plans. The locations shall be determined in the field during construction. This item shall include all costs for furnishing the labor, equipment, and material necessary to install the fire hydrant, auxiliary valve, and valve box all in accordance with the details shown on the Plans and as described in the Specifications.

The work shall include excavating the trench, disposing of the excavated materials, furnishing and placing all materials necessary to install the fire hydrant, furnishing and installing the V-Bio Polyethylene Encasement around the pipe, installing the thrust blocking, furnishing and placing the bedding material and trench backfill, and properly compacting the materials placed into the trench after the installation of the fire hydrant.

The fire hydrants to be installed under this Contract shall be the Mueller "Super Centurion" Model A-423 of the "breakaway" design having a five and one-quarter inch (5-1/4") main valve opening, four and one-half inch (4-1/2") pumper nozzle, and two (2) two and one-half inch (2-1/2") hose nozzles. The pumper and hose threads shall be National Standard Threads. The inlet connection shall be six inches (6") in size and flanged type. The bury depth shall be six feet (6'-0"), the direction of opening to the left, the size of the operating nut shall be one and one-half inches (1-1/2"), the hydrant packing of the "O" ring type, and the hydrant shall be painted a RED color. The auxiliary valves shall be 6", flange by mechanical-joint, Resilient Wedge Valve.

The valve box to be furnished and installed under this item shall be 8" in diameter and screw type.

The Contractor is responsible for installing the fire hydrants at the correct bury depth as described in the Specifications. Fire hydrant extensions shall not be permitted unless otherwise approved by the Engineer and these costs shall be considered incidental to this item.

Basis of Payment: This item shall be at the Contract unit price per Each for FIRE HYDRANT

WITH AUXILIARY VALVE AND VALVE BOX.

DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED

This item shall include the adjustment of water service boxes or valve boxes that require replacement parts due to existing damage or proposed grade change. The water service boxes are located within the limits of proposed curb, sidewalk, driveway pavement, hot-mix asphalt pavement, and grassed parkways.

The replacement parts shall consist of Tyler Union 29U-Domestic Heavy-Duty Cast-Iron Curb, Service, and valve boxes and subsequent components. Sizes range from 19" to 72" (not including risers or extensions) and shall be of the Adjustable Slip and Screw type. The parts shall contain an asphaltic bituminous coating applied to a minimum thickness of 1.5 mil and shall be installed in full accordance with the manufacturer's recommendations.

The Contractor shall adjust these water service boxes or valve boxes to their final grade. This price shall include all costs for furnishing the labor, equipment, and materials necessary to excavate around the existing water service box, install the replacement part(s), and install bedding or backfill to allow for placement of the proposed curb, sidewalk, driveway pavement, hot-mix asphalt pavement or top soil and sod.

The depth of repair shall be approved by the Engineer. It is anticipated that most water service boxes and valve boxes to be adjusted will only require replacement of the top section of the service box. 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 perform this work shall also be included in this item.

Water service boxes and valve boxes that can be adjusted to final grade without replacement parts shall not be paid for under this item but shall be included in the Contract.

Any water service boxes or valve boxes damaged during construction shall be replaced at the Contractor's expense.

Basis of Payment: The work will be paid for at the Contract unit price per Each of DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED.

PIPE UNDERDRAINS, TYPE 1, 6"

This item shall include the furnishing and installation of perforated 6" polyvinyl chloride (PVC) underdrain from CLEANOUTS to STORM SEWER, CLASS B, TYPE 2, 6", in accordance with Article 601of the "Standard Specifications," at locations shown on the Plans or as directed by the Engineer.

The pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-3034. The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction". Connection to proposed underdrain shall be made with a 6” x 6” PVC wye fitting paid under STORM SEWER CONNECTION.

The underdrain will be wrapped in a nonwoven geotechnical fabric envelope meeting the requirements of Article 1080. All pavement removal, excavation, and removal of existing pipe shall be included under this item. The cost of this work will be included under this item.

All pavement removal, excavation, pipe bedding, and trench backfill shall be included under this item.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of PIPE UNDERDRAINS, TYPE 1, 6”.

INLETS, TYPE A, TYPE A FRAME, OPEN LID

This item shall consist of furnishing and installing an inlet at the locations shown on the Plans and in accordance with the details shown on the Plans. The Contractor will be responsible for ensuring that the pipe openings are formed in the correct locations so that additional cutting of the precast structure is not necessary. A minimum of 2” and a maximum of 6” of adjustment rings will be allowed.

Any pipe, up to four feet (4’) in length per each pipe, used to connect existing pipes to the proposed structure shall be included in the cost of the structure. All trench backfill and bedding will also be included in the cost of the structure.

The new frame shall be Neenah Foundry No. R-2504 and the lid shall have a Type D grate.

The removal of structures where a new structure is to be installed in the same location will not be paid for separately but shall be included in the cost of the new structure.

Basis of Payment: The work will be paid for at the Contract unit price per Each of INLETS, TYPE A, TYPE 1 FRAME, OPEN LID.

VALVE VAULTS, TYPE 1, 4’-DIAMETER, TYPE 1 FRAME, CLOSED LID

This item shall include the installation of four-foot (4') diameter precast reinforced concrete valve vaults over existing or proposed valves at locations shown on the Plans.

Openings shall be cast into the lower barrel section to allow the water main to pass through the vault. The openings shall be large enough such that no part of the barrel section rests directly on the water main or fittings. The void remaining between the pipe and barrel section of the vault shall be sealed with cement brick and mortar and a coat of mortar one-half inch (1/2") thick shall be applied to the surface of the brick-and-mortar seal. This shall be done along the interior and exterior wall of the vault.

The top opening and frame shall be centered over the gate valve as shown on the detail or as otherwise directed by the Engineer.

All trench backfill used to fill around the new structure will also be considered incidental to this item. All required excavation and disposal of excavated material shall be included in the cost of this item.

The Type 1 Frame and closed lid used for this item shall be of the same specifications as described under the FRAMES AND LIDS item. The lid shall have the word "WATER" cast in raised letters for each vault.

This item shall include all costs for furnishing labor, materials, and equipment necessary to excavate, furnish and install the complete structure including the frame and lid to the proper grade, install and compact the trench backfill, and to perform any other work necessary to construct this item in accordance with the Specifications.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for VALVE VAULT, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID.

CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID

This item shall include the adjustment of existing catch basins or inlets with a new, open lid frame at locations shown on the plans or as directed by the Engineer. The new frames on catch basins shall be Neenah Foundry No. R-2504. All open lids will have a Type D grate. Any substitution must be approved by the Village in writing before it will be accepted.

Structures, which are located in the curb and gutter, shall not be adjusted to final grade until the curb and gutter has been placed to within six feet (6') of each side of the structure. At this time the Contractor may adjust the structure to the proper elevation to achieve drainage of the curb and gutter.

Frames located in the curb and gutter shall be pitched 1-1/2". Frames located in the pavement shall be pitched to match the cross slope of the pavement. The Contractor may use solid pieces of concrete or brick as shims to pitch the frame. The use of rocks to adjust the frames will not be

permitted. The shims must also be placed in a bed of mortar at the time of the adjustment. The Contractor shall not shim the frame and then come back later to mortar the voids between the frame and the structure.

The Contractor shall take care when setting the structure so as to ensure that a nine inch (9") frame and the minimum 2" of grade rings can be placed on top of the uppermost precast section of the structure in order to reach the finished grade.

The Contractor shall not place mastic rope between concrete rings and between the rings and frame. The Contractor shall apply a one-quarter inch (1/4") layer of butyl rubber gasket sealant to the external diameter of the concrete grade adjustment rings.

Basis of Payment: The work will be paid for at the Contract unit price per Each of CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID.

FRAMES AND LIDS TO BE ADJUSTED

This item shall include adjusting all frames and lids located within the curb and gutter as depicted on the Plans or directed by the Engineer.

Structures shall not be adjusted to final grade until the curb and gutter has been placed to within six feet (6') of each side of the structure. At this time the Contractor may adjust the structure to the proper elevation to achieve drainage of the curb and gutter.

All proposed and existing structures located within the pavement are to be adjusted to finish grade after the hot-mix asphalt binder course has been placed. The pavement disturbed by the adjustment will be replaced with eight inches (8") of concrete base course to the grade of the hot-mix asphalt base course. The removal and replacement of the pavement shall be included as part of this item. The pavement shall be saw-cut to full depth in a 5' x 5' square prior to removal.

Frames located in the curb and gutter shall be pitched 1-1/2". Frames located in the pavement shall be pitched to match the cross slope of the pavement. The Contractor may use solid pieces of concrete or brick as shims to pitch the frame. The use of rocks to adjust the frames will not be permitted. The shims must also be placed in a bed of mortar at the time of the adjustment. The Contractor shall not shim the frame and then come back later to mortar the voids between the frame and the structure.

The Contractor shall take care when setting the structure so as to ensure that a nine inch (9") frame and the minimum 2" and maximum of 6" of grade rings shall be placed on top of the uppermost precast section of the structure in order to reach the finished grade.

The Contractor shall not place mastic rope between concrete rings and between the rings and

frame. The Contractor shall apply a one-quarter inch (1/4") layer of butyl rubber gasket sealant to the external diameter of the concrete grade adjustment rings.

Frames located in sidewalk or driveway pavement shall be pitched to match the cross slope of the surface.

Basis of Payment: The work will be paid for at the Contract unit price per Each of FRAMES AND LIDS TO BE ADJUSTED.

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED)

This item shall include the construction of combination concrete curb and gutter type B-6.12 at locations directed by the Engineer.

A six inch (6") wide concrete wedge shall be installed along the edge of pavement. The pavement shall be saw cut six inches (6") from the edge of pavement and removed to allow for framing of the proposed curb and gutter prior to removing the curb. After the curb has been placed and the forms have been removed, the void between the existing base and the new gutter shall be filled with a minimum thickness of eight inches (8") of concrete. The concrete shall be set three inches (3") below the proposed edge of pavement. The placement of the concrete wedge shall be included in this item.

All curb shall be placed on a cushion of 2" compacted aggregate, Gradation CA-6 which shall be included in the cost of this item.

The construction of the combination concrete curb and gutter shall be in accordance with Section 606 of the Standard Specifications and the details for this item as shown on the Plans. The proposed gutter flag shall have a minimum thickness of ten inches (10"). The height of the curb head shall vary in accordance with the grades shown on the Plans or as directed by the Engineer.

At any locations where sidewalk, driveways, or concrete median are adjacent to the back of curb, the area behind the curb shall be backfilled with crushed stone meeting the CA-7 gradation. The price for furnishing and installing the crushed stone shall be considered included in this item.

Between four (4) and twenty-four (24) hours after the curb has been placed, contraction joints two inches (2") in depth, shall be saw-cut at a maximum of a 15' spacing and at certain other locations as may be indicated by the Engineer. These joints shall then be sealed according to the requirements of Article 420.14(a) of the "Standard Specifications for Road and Bridge Construction". At locations where the proposed curb meets existing curb, and expansion joint will be installed with 2 - 18" long, ¾" diameter, epoxy coated, steel dowel bars drilled into the existing curb. The cost of this work will be included in this item.

It shall be the Contractor's responsibility to provide for curb depressions to be constructed where public sidewalks are to be ramped at curb crossings. The depressions shall be constructed in basic compliance with the Accessibility Guidelines as detailed in the Americans with Disabilities Act (ADA).

After removal of the "back of curb" form, the excavated area behind the curb shall be immediately backfilled with select earth backfill in preparation for the placement of the topsoil. The void behind the curb and gutter will be backfilled with crushed stone, gradation CA-7, in all areas where concrete or hot-mix asphalt pavement is to be constructed. The placement of the required backfill material will be included in the placement of the curb and gutter.

One inch (1") thick wooden forms will be used in the forming of all radius sections of curb and gutter. Masonite and steel forms will not be allowed.

Basis of Payment: The work will be paid for at the Contract unit price per foot of COMBINATION CONCRETE CURB AND GUTER TYPE B-6.12 (MODIFIED).

TELEVISION INSPECTION OF SEWERS

This item shall include the televised inspection of combined sewers and storm sewers within the limits of water main replacement or as directed by the Engineer. The Contractor shall televise the entire length of combined sewer and storm sewers from manhole to manhole for all combined sewers indicated for televising. The camera will also stop and look up each service connection as part of the televised inspection. The televised inspection of the combined sewers and storm sewers shall take place no less than fourteen (14) days after all utility work has been completed and at least 7 days prior to the installation of the hot-mix asphalt binder.

The Contractor shall furnish all labor, electronic equipment, and technicians to perform closed-circuit color television inspection of the sewers that have been repaired. Operation of the equipment is to be controlled from above ground with a skilled technician at the control panel in the television studio controlling the movements of the television camera through the sewer in either direction.

The color television camera shall be one specifically designed and constructed for the purpose of televising sewers. The color camera shall have a high-resolution lens, capable of spanning 360-degrees circumference and 270-degrees on the horizontal axis to televise all new sewer services. Focal distance shall be adjustable through a range of 1 inch to infinity. The purpose of the rotating head camera is to view all service connections and to locate any defects.

For manholes that may be difficult to access, the Contractor shall have available a self-propelled crawler transporter on which to mount the color television camera so as to be able to inspect the sewer as required.

The results of the sewer inspection shall be recorded on a narrated videotape and placed on a hard drive. Any out-of-focus video recordings or portions thereof shall be cause for rejection of the video recording and will necessitate re-televising at the Contractor's expense. Televising shall be done one section at a time. Each hard drive shall also be accompanied with an index.

This item shall include any cleaning that is necessary to televise the sewers according to the Specifications.

Basis of Payment: This item shall be paid for at the Contract unit price per Foot for TELEVISION INSPECTION OF SEWER.

WASHOUT BASIN

This item shall include the installation, maintenance, and removal of concrete washout basins at locations indicated on the Plans or as directed by the Engineer.

Prior to any Portland Cement Concrete, washout basins shall be installed at each designated area. The washout basin shall consist of a barrier wall lined with 30-MIL polyethylene on the sides and bottom. The plan for the concrete washout boxes shall be submitted and approved by the Engineer prior to installation and will be inspected after installation. Maintenance of the proposed concrete washout boxes will be completed by the Contractor. Typical maintenance practices will include replacing damaged liner, disposing of solidified concrete washout, and removal of any discharge within 24 hours.

The washout basins shall be removed by the Contractor within 48 hours of completion of the concrete for the project or as directed by the Engineer. The Contractor will be responsible for cleaning the washout basin area of any debris after the box has been removed from the site.

Basis of Payment: This work will be paid for at the Contract unit price per Lump Sum for WASHOUT BASIN.

REMOVE AND REINSTALL BRICK PAVER

This item shall include the removal, storage, installation, and cleaning of existing brick pavers at locations shown on the Plans or as directed by the Engineer.

The Contractor shall be responsible for carefully removing and storing the existing brick pavers so as not to cause any damage to the pavers. The existing brick pavers shall be installed in their original pattern after the installation of adjacent curb and gutter, sidewalk, 4" concrete base, or 8" concrete base.

A filter fabric shall be installed on the Portland Cement Concrete Base Course prior to the placement of the sand cushion which shall extend up along the back of concrete curb or band to the elevation of the top of the brick sidewalk. The filter fabric shall be non-woven. Sand shall be spread over the filter fabric with a 1" thickness and leveled to required slope and grade. The bed shall not be compacted until pavers are installed. Pavers with chips, cracks or other aesthetic defects shall not be used. Pavers shall be set true to line and grade and be tightly butted. Joints between pavers shall not exceed 1/8". The pavers shall be compacted by a mechanical vibratory compactor on the surface until pavers are uniformly level, true to grade, and immobilized. Where required, pavers shall be cut with a masonry or concrete saw. Edges shall be plumb and straight. Scoring and breaking will not be acceptable.

A rigid edge strip shall be installed in all areas where pavers are to be installed against a surface other than concrete if applicable.

Included in this item, the Contractor shall clean all existing brick pavers after installation by pressure washing or other cleaning method as determined by the Engineer. After cleaning has been completed and approved by the Engineer, the joints between pavers shall be filled by sweeping sharp sand into the joints. When joints are filled, paver surfaces shall be swept clean of sand. Cleaning of all existing brick will be included under this item.

The contractor is responsible for protection and storage of the existing brick pavers which are removed during the construction process. If any of the existing brick pavers are damaged while being removed or stored, the Contractor will be required to replace them at their expense. Any remaining brick pavers after replacement will be delivered to the Village.

Basis of Payment: The work will be paid for at the Contract unit price per Square Foot of REMOVE AND REINSTALL BRICK PAVER.

CONNECTION TO EXISTING DRAINAGE STRUCTURE

This item shall include core-drilling existing structures and the installation of watertight flexible rubber connectors. This item shall be used where proposed sewer is to be installed and connected to an existing structure.

All pipe connections to existing structures shall be made by core-drilling the wall of the existing structure and inserting an expandable, flexible rubber connector into the wall of the existing structure. The connector shall conform to ASTM C-443 & C-923 and include a stainless-steel band.

The existing structure shall be core drilled with a mechanical powered rotary core drill. The hole shall be watertight with the connector. The use of mortar, brick, or rock shall not be permitted to fill in voids.

If it is not possible to core drill a hole into the existing structure, then the connection shall be made by pouring a concrete collar around the pipe connection to the structure in accordance with MWRD requirements. The Contractor shall obtain Engineer approval prior to making connection to existing structure using a concrete collar.

Basis of Payment: The work will be paid for at the Contract unit price per Each of CONNECTION TO EXISTING DRAINAGE STRUCTURE.

VALVE VAULTS TO BE ABANDONED

This item shall consist of the abandonment of valve vaults at locations shown on the plans or as directed by the Engineer. The structure shall be removed to a minimum of twelve inches (12") below grade and all debris and water shall be removed from the structure. The remainder of the structure shall be filled with granular stone, Gradation CA-7/CA-11 when the structure is located beneath or within two feet (2') of pavement surfaces and filled with select earth backfill when the structure is located in a grass parkway. A minimum ¼" thickness steel plate will be placed over the top of the structure after it has been backfilled for all structures which are to be filled with select earth backfill. It shall also be the responsibility of the contractor to seal with brick and mortar all pipes at both ends that connect to these structures.

This price shall include all costs for providing the labor, equipment, and material necessary to complete the abandonment of the structure in accordance with the Specifications.

Basis of Payment: This item shall be at the Contract unit price per Each for VALVE VAULTS TO BE ABANDONED.

PRESSURE TESTING AND DISINFECTION

The water main installed under this Project shall be pressure-tested and disinfected in accordance with the Specifications herein described. The new water mains or any valved sections shall be subject to a hydrostatic pressure test in basic compliance with Section 41-2.14 of the "Standard Specifications for Water and Sewer Main Construction in Illinois". The pipe shall be subjected to a hydrostatic pressure of one hundred fifty (150) pounds per square inch. Duration of each pressure test shall be for a period of not less than two (2) hours for pipes that have been backfilled before tests are made.

All joints showing visible leaks shall be repaired until they are tight. Any cracked or defective pipe, fitting, or valves discovered in consequence of this pressure test shall be removed and replaced by the Contractor with sound material and the test shall be repeated.

Suitable means shall be provided by the Contractor for determining the quantity of water lost by

leakage under the specified test pressure. Allowable leakage shall not be greater than that computed by the following table.

Diameter of Pipe	Allowable Leakage in Gal/Hr/1,000 Ft
12 Inch	0.99
10 Inch	0.83
8 Inch	0.66
6 Inch	0.50

Leakage is defined as the quantity of water to be supplied in the newly laid pipe or any valved section of it necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled.

After satisfactory completion of the hydrostatic testing, the piping shall be flushed to remove any solutions, debris, or contaminated materials that may have lodged within the piping. The flow velocity of the water in the piping during the flushing shall be not less than 2.5 feet per second and shall be a maximum velocity sufficient to deliver clear, debris-free water at the discharge point. Water mains shall be disinfected by or under the direction of an experienced professional chlorination technician retained by the Contractor, in a manner acceptable to the Engineer and the State Department of Health, and in accordance with AWWA Standard C651-99. After the chlorination process, water samples shall be collected at each of the sampling taps and submitted to the laboratory for bacteriological examination of two (2) separate days. Should the chlorination fail to result in approval, the chlorination procedures shall be repeated until satisfactory results are obtained. Sampling taps shall not be paid for as a separate item but shall be included in this item.

The supply of water necessary to pressure-test and disinfect the proposed water main shall be provided by the Village of Brookfield through connections to its water system. This item shall include all cost for furnishing the labor and equipment necessary to pressure test and disinfect the proposed water mains in accordance with the Specifications.

Included in this item shall be any temporary fittings or appurtenances, such as end caps, tapped outlet caps, or copper “whips” required during the flushing, pressure testing, and chlorination processes.

Basis of Payment: This item shall be incidental to the other water main items including but not limited to 56103000 DUCTILE IRON WATER MAIN 6”, 56103100 DUCTILE IRON WATER MAIN 8”, 56103400 DUCTILE IRON WATER MAIN 16”, 56400820 FIRE HYDRANTS WITH AUXILIARY VALVE AND VALVE BOX, and XX009157 WATER MAIN 8” (SPECIAL).

TREE GRATES

This item shall include the furnishing and installing of cast iron tree grates and frames at locations shown on the plans or as directed by the Engineer. The size of the frame and grate shall be 4' x 6'. The frame and grate shall be East Jordan 00869503 Tree Grate Set. The installation of the frame and grate shall be in accordance with the project details and the manufacturers recommended procedures. The Contractor shall submit shop drawings for review and approval prior to ordering.

The frames should butt together snugly, leaving as little gap as possible. Frame sections must be level and the tree grate seat must be in a true flat plane to prevent rocking of the grate. The tree grate frame shall be mounted into the CONCRETE RIBBON using a frame assembly as indicated in the details on the Plans. Payment for this work will be included in this item.

Basis of Payment: The work will be paid for at the Contract unit price per Each for TREE GRATES.

TREE GRATE REMOVAL

This item shall include removal of existing tree grate and frames at locations shown on the Plans or as directed by the Engineer. The Contractor shall be responsible for completely removing all components of the existing tree grate and delivering to the Village of Brookfield Public Works Yard located at 4545 Eberly Avenue.

Basis of Payment: The work will be paid for at the Contract unit price per Each of TREE GRATE REMOVAL.

TEMPORARY ACCESS (PRIVATE ENTRANCE)

The contractor shall construct and maintain aggregate or raised wooden ramps for temporary access to business or private entrances on Prairie Avenue according to Article 402.07 and as directed by the Engineer.

The ramps shall be constructed to the dimensions and grades as follows, except as modified by the plans or as directed by the Engineer. The minimum width shall be five feet (5'). The minimum compacted thickness shall be six inches (6"). The maximum grade shall be eight percent (8%), except as required to match the existing grade. The raised wooden ramps shall extend over sidewalk that has been removed or is curing and shall have railings on each side to prevent pedestrians from falling. During removals, the Contractor shall install the aggregate or wooden ramps once the sidewalk in front of a business has been removed to allow for access. It is the responsibility of the Contractor to ensure all ramps are secure at the end of each work day. All ramps to be approved by Engineer prior to being opened for pedestrian use.

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.

Basis of Payment: The work will be paid for at the Contract unit price per Each of TEMPORARY ACCESS (PRIVATE ENTRANCE).

DETECTABLE WARNINGS (SPECIAL)

This item shall include the placement of radial detectable warnings at locations shown on the Plans or as directed by the Engineer. This item shall be installed simultaneously with PORTLAND CEMENT CONCRETE SIDEWALK, 5".

Work shall be performed according to the Americans with Disabilities Act (ADA), Public Right-of-Way Accessibility Guidelines (PROWAG), IDOT Standard 424001-12, as well as Article 424 of the Standard Specifications.

The composite paver tile used in this project shall be manufactured by ADA Solutions, Inc. (www.ADATILE.com) or Armor-Tile or Tuff-Tile. The paver tiles shall be installed according to the manufacturer's installation procedures and shall be "Brick Red" in color.

This item shall not be a "Surface Applied" product.

Immediately following the installation of PORTLAND CEMENT CONCRETE SIDEWALK, 5", the detectable warning shall be pressed into the concrete. The detectable warning shall be tamped with a vibrating mechanism upon installation, and the factory-installed plastic sheeting must remain in place during the entire installation process to prevent the splashing of concrete onto the finished surface of the tile. No concrete shall be removed in the area to receive the detectable warning to ensure a strong lock with the concrete. The top of the domes shall be set level to the adjacent concrete on the top and sides of the ramp. This item shall be installed in full accordance with the manufacturer's recommendations.

Basis of Payment: The work will be paid for at the Contract unit price per Square Foot of DETECTABLE WARNINGS (SPECIAL).

HOT-MIX ASPHALT DRIVEWAY PAVEMENT REMOVAL

This item shall include the removal of any hot-mix asphalt surface not part of the street pavements that are to be replaced as part of the project and as directed by the Engineer. The work shall be performed in accordance with Section 440 of the "Standard Specifications for Road and Bridge Construction". The Contractor shall be required to saw cut the hot-mix asphalt full-depth at the limits of removal.

For pavements that include the hot-mix asphalt surface over aggregate base the entire hot-mix asphalt surface and any existing aggregate base shall be removed to allow for the placement of a minimum of three inches (3") of new hot-mix asphalt placed.

For pavements that include the hot-mix asphalt surface over concrete base the entire hot-mix asphalt surface shall be removed to the concrete base. The Contractor shall apply a bituminous tack coat according to Art.406.02 and 406.06(c)(1) on the existing concrete base prior to the installation of the new hot-mix asphalt.

The area to be improved shall be graded and compacted to the satisfaction of the Engineer. This work shall be included in this item.

The new hot-mix asphalt surface shall be paid for under the item for INCIDENTAL HOT-MIX ASPHALT SUFACING.

Basis of Payment: The work will be paid for at the Contract unit price per Square Yard of HOT-MIX ASPHALT DRIVEWAY PAVEMENT REMOVAL.

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

This item consists of the removal of the existing hot-mix asphalt surface necessary to provide the profile of the proposed pavement cross section.

The anticipated typical removal depth is to be three and one quarter inches (3 ¼") below the gutter flag. However, the removal depth may vary according to the existing conditions encountered and may therefore include full width removal of three inches (3") or more if such conditions require.

Milling is to occur in passes which will profile the roadway to the new proposed crown and crown elevations. Milling to achieve the proposed roadway profile and elevations will be included in the cost of this item. This item shall include the removal of any concrete or stone base course that is necessary to achieve the required section and the shaping and compacting of any aggregate base that is exposed during grinding operations.

Sufficient milling or grinding passes shall be made over the existing pavement so that all irregularities and high spots are eliminated from the pavement's surface before it is overlaid with new material.

The equipment and construction methods for this item will conform to Article 440.03 of the Standard Specifications for Road and Bridge Construction. Hot-Mix Asphalt Surface Removal will be measured in place and the area computed in square yards for the total increment of

material removed. The area measured will be paid for only once regardless of the number of passes needed to remove the material.

Basis of Payment: The work will be paid for at the Contract unit price per Square Yard of HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.

TEMPORARY PATCHING

This item shall include the installation and removal of any temporary hot-mix asphalt surface patches of utility trenches shown on the plans or as directed by the Engineer.

The contractor shall remove any existing asphalt surface or aggregate to allow for the placement of a minimum of two inches (2") of new hot-mix asphalt placement. The hot-mix asphalt surface course shall be installed and compacted with a minimum thickness of two inches (2") and match the existing adjacent hot-mix asphalt surface in accordance with Section 408 of the "Standard Specifications for Road and Bridge Construction".

The material will be as shown in the paving mix chart on the plans.

For areas to be resurfaced on the plans, this item shall also include removal of the temporary asphalt patch once the contractor begins Class C or Class D patching of the pavement.

The Contractor is responsible for maintaining the temporary patching for its duration. Any necessary reapplication of material, regrading, or other required maintenance of temporary patching will be included in this item.

Basis of Payment: The work will be paid for at the Contract unit price per Square Yard of TEMPORARY PATCHING.

STORM SEWER CONNECTION

This item shall include the furnishing and installation 6" x 6" polyvinyl chloride (PVC) connections from PIPE UNDERDRAINS, TYPE 1, 6" to STORM SEWER, CLASS B, TYPE 2, 6". The Contractor shall use a 6" x 6" PVC wye fitting to connect the underdrain to the storm sewer.

The fittings shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

Basis of Payment: The work will be paid for at the Contract unit price per Each of STORM

SEWER CONNECTION.

CLEANOUTS

This item shall include the furnishing and installation of a six inch (6") polyvinyl chloride (PVC) cleanout and connection to PIPE UNDERDRAINS, TYPE 1, 6" at locations shown on the Plans or as directed by the Engineer.

This item shall include PVC cap, riser section, and any fittings required to make a secure connection to the proposed underdrain on the 3700 block of Prairie Avenue as shown in the details on the Plans. The pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

All pavement removal, excavation, pipe bedding, and trench backfill shall be included under this item.

Basis of Payment: The work will be paid for at the Contract unit price per Each of CLEANOUTS.

DUCTILE IRON WATER MAIN FITTINGS

Unless listed under other Contract items, all bends, crosses, tees, sleeves of all types, reducers, plugs or caps, and other fittings required to assemble and secure the proposed water mains along the route shown on the Plans shall be included under this item. All fittings shall be the ductile iron type and meet the Specifications herein described under the paragraph entitled "PIPE FITTINGS AND SPECIAL CASTINGS."

The costs for furnishing and installing the standard joint accessories (gland, gasket, and bolts) for these fittings shall be considered incidental to the Contract unit price for this item and shall not be paid for separately. The payment under this item shall be based upon the weight of the fitting's body casting only. All joints will be restrained with retainer glands. The retainer glands will not be paid for separately but shall be considered incidental to the cost of the fitting except at locations where the Engineer in the field specifies the use of MEGALUG retainer glands.

All fittings shall be manufactured in the USA. The manufacturer will furnish a certificate acknowledging the same to the Engineer.

The Contractor shall maintain a list of fittings installed and shall provide an invoiced listing of the body casting weights of these fittings to be used for determining the payment for this item.

All concrete blocking to be furnished and installed shall be considered incidental work under this item. This item shall include all costs for providing the labor, equipment, and material necessary to furnish and install the required fittings, joint accessories, and thrust blocking in accordance with the Specifications.

Basis of Payment: The work will be paid for at the Contract unit price per Pound of DUCTILE IRON WATER MAIN FITTINGS.

WATER MAIN INSULATION

This item shall include the installation of eight-inch (8") diameter water main pipe insulation at the locations shown on the Plans. The actual locations and the limits of pipe to be insulated shall be determined by the Engineer.

The insulating material shall be manufactured by Dragon Jacket Insulation.

The insulating material shall completely encase the pipe in a clamshell manner, secured with steel bands. The insulation material shall be a closed-cell foam and reach a minimum operating temperature of -60°F with an R-value of 6.25 per inch, per ASTM C518/C177 testing methods.

This item shall also include the appropriate covers/collars for push joints and mechanical joints, overlapping the straight pipe insulation where joints are present.

The Contractor will not backfill the insulated pipe until approved by the Engineer.

This item shall include all labor, equipment, and materials required to install the water main insulation.

Basis of Payment: This item shall be paid for at the Contract unit price per Foot for WATER MAIN INSULATION.

WATER SERVICE LINE 1", (BORED)

This item shall include the installation of water services to properties located on the opposite side of the street as the proposed water main. The transferring of the water services shall be done after the new water main has been placed into service and before the existing water main has been disconnected.

A corporation tap shall be made into the water main and 1" copper water service pipe, Type K, shall be installed from the tap to a new curb stop (roundway complete with box) to be located as shown on the Plans. The water service box shall be located three feet (3') from the front of the sidewalk, unless otherwise directed by the Engineer. The proposed water service will connect

with the existing water service on private property side of the new water service box.

Long water services shall be installed using a directional boring method. The Contractor will not be allowed to set up his equipment on private property nor cause any damage to private property, unless otherwise approved by the Engineer and the Village. It is recommended that the Contractor utilize a directional augering machine that can sit in a pit excavated adjacent to the water main trench. The method for directional augering the long water services must be approved by the Engineer and the Village prior to the beginning of this work. If the Contractor wishes to utilize lead extraction by using a pipe puller (Kobus or similar) for installing a service, he must first get approval by the Engineer on a case-by-case basis, and the installation of these services shall also be included under this item. If it is determined that an open cut method will be required in place of the specified directional boring method for any water services, the installation of these services will also be paid for under this item. The estimated length of new copper pipe to be installed is sixty feet (60').

The Contractor will not backfill the connections at the corporation stop and the roundway until the Village or the Engineer has inspected all connections with the service under pressure.

This price shall include all costs for furnishing the labor, equipment, and materials necessary to make the tap into the water main, furnish and install the curb stop and box, copper pipe (Type K), and connecting fittings, make the connections at the tap, curb stop, and existing water service, install and compact the trench backfill, and to perform any other work necessary to complete the installation of the new water service in accordance with the Specifications.

Basis of Payment: The work will be paid for at the Contract unit price per Each for WATER SERVICE LINE 1" (BORED).

WATER SERVICE LINE 2", (BORED)

This item shall include the installation of water services to properties located on the opposite side of the street as the proposed water main. A corporation tap shall be made into the water main and 2" copper water service pipe, Type K, shall be installed from the tap to a new curb stop (roundway complete with box) to be located as shown on the Plans. The 2" tap shall be made with the specified saddle referenced herein the Specifications as directed by the Engineer, or as otherwise approved. In conjunction with the work described above, the construction and payment for this item shall be the same as WATER SERVICE LINE 1" (BORED) except for the designated difference in the size of the service.

Basis of Payment: The work will be paid for at the Contract unit price per Each for WATER SERVICE LINE 2" (BORED).

WATER SERVICE REPLACEMENT, 1.5" - SHORT

This item shall include the installation of water services to properties located on the same side of the street as the proposed water main. A corporation tap shall be made into the water main and 1 ½" copper water service pipe, Type K, shall be installed from the tap to a new curb stop (roundway complete with box) to be located as shown on the Plans. The 1 ½" tap shall be made with the specified saddle referenced herein the Specifications as directed by the Engineer, or as otherwise approved. In conjunction with the work described above, the construction and payment for this item shall be the same as for WATER SERVICE INSTALL, 1" COMPLETE except for the designated difference in the size of the service.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for WATER SERVICE REPLACEMENT, 1.5" - SHORT.

CONNECTION TO EXISTING WATER MAIN 6"

This item shall include the connections of the proposed water main to existing 6" water mains at locations shown on the Plans along Prairie Avenue. This work shall be performed in accordance with the details on the Plans. This item shall also include the disconnection and abandonment of the existing water mains.

The Contractor shall coordinate with the Engineer and the Village on the time and duration of the shut down. Once the shut down is made, the Contractor shall continue work until the valve and fittings necessary have been installed and the existing water mains can be placed back into service, regardless of the actual duration of the shut down.

To perform these connections, the Contractor, with the assistance and supervision of the Village of Brookfield's Water Department, shall make the necessary valve closings at these locations, remove the located fittings and sections of water main, and then proceed to install the connection as detailed on the Plans.

The associated water main, fittings, valves, and valve vaults will each be paid for separately under their respective Contract Pay Items. This item shall include all other work that must be performed at these locations by the Contractor and that is not included under the various Contract Pay Items listed in the Summary of Quantities and described in these Specifications.

This price shall include all costs for furnishing labor and equipment necessary for exploratory excavation, exposing the water system's mains at this location, shutting down the existing water mains, cutting and removing piping and fittings, and performing any other additional incidental work not included under other Contract items in order to properly complete the necessary connections in accordance with the details shown on the Plans and the Specifications.

Basis of Payment: The work will be paid for at the Contract unit price per Each for CONNECTION TO EXISTING WATER MAIN 6".

CONNECTION TO EXISTING WATER MAIN 8"

This item shall include the connections of the proposed water main to existing 8" water mains at locations shown on the Plans along Prairie Avenue. This work shall be performed in accordance with the details on the Plans. This item shall also include the disconnection and abandonment of the existing water mains.

The construction and payment for this item shall be the same as CONNECTION TO EXISTING WATER MAIN 6" except for the designated difference in the size of the existing water main that the proposed water main shall be connected to.

Basis of Payment: The work will be paid for at the Contract unit price per Each for CONNECTION TO EXISTING WATER MAIN 8".

CONNECTION TO EXISTING WATER MAIN 16"

This item shall include the connections of the proposed water main to existing 16" water mains at locations shown on the Plans along Prairie Avenue. This work shall be performed in accordance with the details on the Plans. This item shall also include the disconnection and abandonment of the existing water mains.

The construction and payment for this item shall be the same as CONNECTION TO EXISTING WATER MAIN 6" except for the designated difference in the size of the existing water main that the proposed water main shall be connected to.

Basis of Payment: The work will be paid for at the Contract unit price per Each for CONNECTION TO EXISTING WATER MAIN 16".

VALVE VAULTS TO BE REMOVED

This item shall include the removal of existing valves and valve vaults at locations shown on the Plans or as directed by the Engineer. Any removal of water main pipe necessary for the removal of the valve and vault shall be included in the cost of this item and shall be performed in a manner to protect the integrity of the pipe scheduled to remain in service. It shall also be the responsibility of the Contractor to cut and cap or seal all pipes at both ends that connect to other structures with brick and mortar. The void left by the removal of the structure will be filled and compacted with trench backfill, which shall be included in the cost of this item.

This price shall include all costs for providing the labor, equipment, and material necessary to

complete the removal of the valve and valve vault in accordance with the Specifications.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for VALVE VAULTS TO BE REMOVED.

VALVE BOX

This work shall be completed in accordance with Section 561 of the Standard Specifications for Road and Bridge Construction and as described herein.

This item shall include furnishing and installing a valve box at the locations shown on the plans or as directed by the Engineer.

The valve box to be furnished and installed shall be similar and equal to the Mueller H-10360 or Tyler Union 6850 Series, having a five and one-fourth inch (5-1/4") shaft and the word "WATER" cast in its cover.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for VALVE BOX.

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)

This item shall include adjusting all frames and lids located within the pavement on streets to be resurfaced as depicted on the Plans or directed by the Engineer.

In addition to Article 603 of the Standard Specifications, this work shall include the removal of frames and lids on structures in the pavement prior to milling and/or excavating the roadway. A steel plate must be used to cover the opening until the adjustment can be performed.

After the placement of binder, a full depth saw cut of pavement around the structure must be made. The dimensions of the saw cut shall be a 5'x 5' box around the location of the frame. The existing pavement or temporary stone within this location shall then be removed and included in this item as part of the frame and lid adjustment. The adjustment box will be replaced with eight inches (8") of concrete base course to the grade of the hot-mix asphalt binder. Class PP-2 concrete within the 5' x 5' box shall be utilized. This work shall be included in this item.

The Contractor shall take care when setting the structure so as to ensure that a nine inch (9") frame and the minimum 2" and maximum of 6" of grade rings shall be placed on top of the uppermost precast section of the structure in order to reach the finished grade.

It will be the Contractor's responsibility to ensure all frames are adjusted to final surface grade.

The Contractor shall not place mastic rope between concrete rings and between the rings and frame. The Contractor shall apply a one-quarter inch (1/4") layer of butyl rubber gasket sealant to the external diameter of the concrete grade adjustment rings.

This work will not be paid for under this item when proposed drainage structures and utility structures are installed or are being reconstructed as part of this project but shall be included in the respective proposed items.

Basis of Payment: The work will be paid for at the Contract unit price per Each of FRAMES AND LIDS TO BE ADJUSTED (SPECIAL).

FRAMES AND LIDS, CLOSED BOLTED

This item shall include the adjustment of existing structures with new bolt down type frames and lids at locations shown on the plans or as directed by the Engineer. The new frames on manholes shall be Neenah Foundry R-1916-C bolted manhole assembly. Any substitution must be approved by the Village in writing before it will be accepted.

All existing structures located within the floodplain in the pavement are to be adjusted to finish grade after the hot-mix asphalt binder course has been placed. The pavement disturbed by the adjustment will be replaced with eight inches (8") of concrete base course to the grade of the hot-mix asphalt base course. The removal and replacement of the pavement shall be included as part of this item. The pavement shall be saw-cut to full depth in a 5' x 5' square prior to removal.

All frames shall be Type 1 Frames. All closed lids placed on sanitary sewer and combined sewer manholes shall be self-sealing with concealed pick holes and shall have the word "SANITARY" cast in raised letters on the lid. All closed lids placed on storm sewer manholes shall be Type B lids and shall have the word "STORM" cast in raised letters on the lid.

The Contractor shall not place mastic rope between concrete rings and between the rings and frame. The Contractor shall apply a one-quarter inch (1/4") layer of butyl rubber gasket sealant to the external diameter of the concrete grade adjustment rings.

Basis of Payment: The work will be paid for at the Contract unit price per Each of FRAMES AND LIDS, CLOSED BOLTED.

REMOVE AND RE-ERECT EXISTING SIGN

This item shall include the removal, storage, and reinstallation of existing signs on the project that are not proposed to be replaced.

Existing village street name signs and other miscellaneous informational signs shall be removed

by the contractor and stored in a secure location designated by the village during the course of construction. The contractor shall assume liability for lost or stolen signs and posts and shall replace these items at their own expense. The Engineer will determine what signs shall be removed. The existing sign posts shall also be removed (and stored along with the signs). Prior to removal, the Contractor shall document the location of each sign and post to serve as a guide during their replacement. If the current location cannot be reused for the sign posts the Contractor will be required to pour a 12" diameter concrete foundation to a depth of 42".

The existing street name signs shall be replaced as close to the original location as possible – unless otherwise directed by the Engineer. This new material will be included in the cost for this contract item. The manner of sign attachment shall be approved by the Engineer.

Basis of Payment: The work will be paid for at the Contract unit price per Each of REMOVE AND RE-ERECT EXISTING SIGN.

TELESCOPING STEEL SIGN SUPPORT (SPECIAL)

This work shall consist of furnishing and installing telescoping steel sign supports for ground mounted signs utilizing a telescoping base section.

This work shall be completed in accordance with Article 728.04 of the Standard Specifications.

The sign support shall be Black Powder-Coated to match existing sign supports at locations adjacent to the project.

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

BASE FOR TELESCOPING SIGN SUPPORT (SPECIAL)

This work shall consist of furnishing and installing a base for telescoping steel sign supports.

This work shall be completed in accordance with Article 731.01 of the Standard Specifications.

The base shall be Black Powder-Coated to match existing sign supports at locations adjacent to the project.

Basis of Payment. This work shall be paid for at the contract unit price per EACH for BASE FOR TELESCOPING SIGN SUPPORT (SPECIAL).

EXPLORATORY EXCAVATION

The uncertainties of the actual locations of existing underground utilities may result in the need for exploratory excavations to be made to locate these utilities followed by the backfilling of these excavations. Whenever, in the opinion of the Engineer, it is necessary to explore and excavate in advance of the structure installation or pipe laying operation to determine the best line and grade for the construction of the proposed pipeline or to determine the elevation and location of existing utilities, the Contractor shall make explorations and excavations for such purposes. Any unauthorized excavation will not be paid for and will be acceptably backfilled at the Contractor's expense.

All excavations located in, or within two feet (2') of paved areas shall be backfilled with trench backfill materials and the surplus excavated materials disposed of by the Contractor as part of this item.

This item will be used to pay for any and all exploratory excavations. Extra billings on a time and material basis will not be considered or accepted for utility work.

This item shall include all costs for furnishing the labor and equipment for any exploratory excavation requested by the Engineer and for the required backfilling of said excavation as described in these specifications.

Basis of Payment: The work will be paid for at the Contract unit price per Cubic Yard of EXPLORATORY EXCAVATION.

GATE VALVES, 8"

This work shall be completed in accordance with Section 561 of the Standard Specifications for Road and Bridge Construction and as described herein.

This item shall include the installation of eight-inch (8") gate valves at the locations shown on the Plans.

All gate valves to be installed in this project shall be Mueller 2360 Series Resilient Wedge Gate Valve with mechanical joints.

A 1" corporation tap shall be made into the water main on each side of the valve to allow for testing, chlorinating, and sampling work to be done. The furnishing and installing of these taps shall be considered incidental to the work necessary for this item. All brass corporation taps are to be manufactured in accordance with AWWA C-800 and ASTM B-62 Specifications. The inlet side of corporation assembly is to be machined with AWWA standard threads, while the outlet is to be machined to accept a standard tube nut for attaching flared 1" diameter copper

tubing. This item shall include all costs for furnishing the labor, equipment, and materials required to install the gate valve and the corporation taps in accordance with the Specifications.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for GATE VALVES, 8".

GATE VALVES, 6"

This work shall be completed in accordance to Section 561 of the Standard Specifications for Road and Bridge Construction and as described herein.

This item shall include the installation of six-inch (6") gate valves at the locations shown on the Plans. The construction and payment for this item shall be the same as for GATE VALVES, 8" except for the designated difference in the size of the valve.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for GATE VALVES, 6".

SANITARY SEWER SERVICE 6"

This item shall include any sections of sewer service pipe past the bend fitting of the connection that may require replacement. The Contractor shall be required to carefully remove the existing sewer service pipe until a structurally sound piece of pipe is exposed. The Engineer will determine the length of existing sewer service pipe to be replaced. The first four feet (4') of pipe from the sewer service connection will not be paid under this item and will instead be paid under 12" X 6" or 15" X 6" PVC SEWER SERVICE CONNECTIONS depending on the sewer size.

For 12" x 6" PVC Sewer Service Connections the pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction in Illinois".

For 15" x 6" PVC Sewer Service Connections the pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-3034. The joints shall be rubber gasket and conform to ASTM designations D-3212 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction in Illinois".

Basis of Payment: The work will be paid for at the Contract unit price per Foot of SANITARY SEWER SERVICE 6".

BRICK PAVER SIDEWALK

This item shall include furnishing and installation of new brick pavers to be placed as shown on the Plans or directed by the Engineer. This work shall be in accordance with Section 1041 of the Standard Specifications for Clay Paving Bricks and the details shown on the plan. The pavers shall be installed in accordance with the manufacturer's recommendations, in the pattern shown on the details, so that they meet the elevation of the adjacent concrete surfaces.

The pavers are to match as closely as possible to the existing pavers to be reset under the item REMOVE AND REINSTALL BRICK PAVERS. The contractor shall submit shop drawings for review and the Village shall select the desired color prior to ordering.

The clay brick pavers will be 4" x 8", 2 ¼" thick, Holland-style clay brick pavers, Old Tavern model, as manufactured by Pinehall Brick Pavers, and are distributed locally by Aspen Valley Landscape Supply located in Lockport, Illinois (Telephone No. (708) 301-0703).

Brick pavers will be placed on a prepared 4" concrete base course. The work shall be performed in accordance with Section 353 of the "Standard Specifications for Road and Bridge Construction". The surface of the concrete base shall be three and one quarter inches (3 ¼") beneath the finished paver grade to allow sufficient room for the brick pavers to be placed. The concrete base course shall be placed upon a cushion of compacted crushed stone, Gradation CA-6, having a minimum thickness of four inches (4"). One-inch (1") holes shall be drilled through the concrete base course into the aggregate to provide for drainage as shown in the Plan details or directed by the Engineer. The cost for this work shall be paid under the item for PORTLAND CEMENT CONCRETE BASE COURSE, 4".

A filter fabric shall be installed on the Portland Cement Concrete Base Course prior to the placement of the sand cushion which shall extend up and overlap along the back of curb to the elevation of the top of the brick sidewalk. The filter fabric shall be non-woven. Sand shall be spread over the filter fabric with a 1" thickness and leveled to required slope and grade. The bed shall not be compacted until pavers are installed. Pavers with chips, cracks or other aesthetic defects shall not be used. Pavers shall be set true to line and grade and be tightly butted. Joints between pavers shall not exceed 1/8". The pavers shall be compacted by a mechanical vibratory compactor on the surface until pavers are uniformly level, true to grade, and immobilized. Where required, pavers shall be cut with a masonry or concrete saw. Edges shall be plumb and straight. Scoring and breaking will not be acceptable. The cost for this work shall be paid for under this item.

A rigid edge strip manufactured by Dimex Pro Edging shall be installed in all areas where pavers are to be installed against a surface other than concrete if applicable.

After cleaning of all existing brick pavers has been completed, the Contractor shall fill the joints

between the brick pavers by sweeping sharp sand into them. When joints are filled, paver surfaces shall be swept clean of sand.

Basis of Payment: The work will be paid for at the Contract unit price per Square Foot for BRICK PAVER SIDEWALK.

12" X 6" PVC SEWER SERVICE CONNECTIONS

This item shall include the installation of 12" x 6" sewer service connections to be replaced. The Contractor will be required to connect the existing sewer services to the proposed sewer during the replacement of the existing sewer. The Contractor will replace the tee fitting, riser section of the service, and the bend fitting used to level the existing service as part of this item. If the length of replacement pipe exceeds four feet (4'), then additional sewer service pipe will be paid for under SANITARY SEWER SERVICE 6".

The fittings and riser pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

Basis of Payment: The work will be paid for at the Contract unit price per Each for 12" X 6" PVC SEWER SERVICE CONNECTIONS.

RESTRAINED JOINT 6" AND RESTRAINED JOINT 8"

At locations specified by the Engineer, 6" or 8" water main fittings shall be restrained by the use of EBBA Iron, Inc., Series 1100, MEGALUG, Retainer Glands. These retainer glands will only be paid for at locations where they have been specified by the Engineer. This item shall include all costs for providing the labor, equipment, and material necessary to furnish and install this item in accordance with the manufacturer's instructions.

Basis of Payment: This item shall be at the Contract unit price per Each for RESTRAINED JOINT 6" or RESTRAINED JOINT 8".

WATER SERVICE INSTALL, 1" COMPLETE

This item shall include the installation of water services to properties located on the same side of the street as the proposed water main. The transferring of the water services shall be done after the new water main has been placed into service and before the existing water main has been disconnected.

A corporation tap shall be made into the water main and 1"copper water service pipe, Type K,

shall be installed from the tap to a new curb stop (roundway complete with box) to be located as shown on the Plans. The water service box shall be located approximately six inches (6") behind the sidewalk, unless otherwise directed by the Engineer. The proposed water service will connect with the existing water service on private property side of the new water service box.

For water main to be installed under the sidewalk, the average length of new copper pipe to be installed is estimated at being five feet (5').

The Contractor will not backfill the water service until the Village or the Engineer has inspected all connections with the service under pressure.

This price shall include all costs for furnishing the labor, equipment, and materials necessary to excavate and expose the existing water service, make the tap into the new water main, furnish and install the curb stop and box, copper pipe (Type K), and connecting fittings, make the connections at the tap, curb stop, and existing water service, install and compact the trench backfill, and to perform any other work necessary to complete the installation of the new water service in accordance with the Specifications.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for WATER SERVICE INSTALL, 1" COMPLETE.

WATER SERVICE INSTALL, 2" COMPLETE

This item shall include the installation of water services to properties located on the same side of the street as the proposed water main. A corporation tap shall be made into the water main and 2" copper water service pipe, Type K, shall be installed from the tap to a new curb stop (roundway complete with box) to be located as shown on the Plans. The 2" tap shall be made with the specified saddle referenced herein the Specifications as directed by the Engineer, or as otherwise approved. In conjunction with the work described above, the construction and payment for this item shall be the same as for WATER SERVICE INSTALL, 1" COMPLETE except for the designated difference in the size of the service.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for WATER SERVICE INSTALL, 2" COMPLETE.

PVC COMBINED SEWER PIPE REPLACEMENT, 12"

This item shall include the replacement of 12" diameter combined sewer sections. In those locations indicated on the Plans, polyvinyl chloride (PVC) sewer pipe of the size indicated shall be installed. The pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with

Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

The pipe bedding and backfill to twelve inches (12") above the top of pipe will be Gradation CA-7 and will be included in this item.

This item shall include the televised inspection of combined sewers that have been repaired as part of this project or as directed by the Engineer. The Contractor shall televise the entire length of combined sewer from manhole to manhole for all combined sewers that have been repaired regardless of the length or number of repairs. The camera will also stop and look up each new service connection as part of the televised inspection. The televised inspection shall take place no less than twenty (20) days after all utility work has been completed and at least 7 days prior to the installation of the hot-mix asphalt surface.

The Contractor shall furnish all labor, electronic equipment, and technicians to perform closed circuit color television inspection of the sewers that have been repaired. Operation of the equipment is to be controlled from above ground with a skilled technician at the control panel in the television studio controlling the movements of the television camera through the sewer in either direction.

The color television camera shall be one specifically designed and constructed for the purpose of televising sewers. The color camera shall have a high-resolution lens, capable of spanning 360-degrees circumference and 270-degrees on the horizontal axis to televise all new sewer services. Focal distance shall be adjustable through a range of 1 inch to infinity. The purpose of the rotating head camera is to view all new service connections and to locate any defects.

For manholes that may be difficult to access, the Contractor shall have available a self-propelled crawler transporter on which to mount the color television camera so as to be able to inspect the sewer as required.

Camera and lighting quality shall be suitable to provide a clear, continuously in-focus picture of the entire inside periphery of the sewer pipe for all conditions encountered during the work. The camera shall be able to operate efficiently in 100% humidity conditions. The camera, television monitor and all other necessary components of the video system shall be capable of producing a minimum 350-line resolution color video picture.

The results of the sewer inspection shall be recorded on a narrated videotape and placed on a hard drive. Any out-of-focus video recordings or portions thereof, shall be cause for rejection of the video recording and will necessitate re-televising at the Contractors expense. Televising shall be done one section at a time. Each hard drive shall also be accompanied with an index.

The combined sewers to be televised as part of this pay item were cleaned and televised within the last two years and are assumed to be in good condition. This item shall include any cleaning

that is necessary to televise the sewers according to the Specifications.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of PVC COMBINED SEWER PIPE REPLACEMENT, 12".

PVC COMBINED SEWER PIPE REPLACEMENT, 15"

This item shall include the replacement of 15" diameter combined sewer sections. In those locations indicated on the Plans, polyvinyl chloride (PVC) sewer pipe of the size indicated shall be installed. The pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation F-679. The joints shall be rubber gasket and conform to ASTM designations D-3212 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

The pipe bedding and backfill to twelve inches (12") above the top of pipe will be Gradation CA-7 and will be included in this item.

This item shall include the televised inspection of combined sewers that have been repaired as part of this project or as directed by the Engineer. The Contractor shall televise the entire length of combined sewer from manhole to manhole for all combined sewers that have been repaired regardless of the length or number of repairs. The camera will also stop and look up each new service connection as part of the televised inspection. The televised inspection shall take place no less than twenty (20) days after all utility work has been completed and at least 7 days prior to the installation of the hot-mix asphalt surface.

The Contractor shall furnish all labor, electronic equipment, and technicians to perform closed circuit color television inspection of the sewers that have been repaired. Operation of the equipment is to be controlled from above ground with a skilled technician at the control panel in the television studio controlling the movements of the television camera through the sewer in either direction.

The color television camera shall be one specifically designed and constructed for the purpose of televising sewers. The color camera shall have a high-resolution lens, capable of spanning 360-degrees circumference and 270-degrees on the horizontal axis to televise all new sewer services. Focal distance shall be adjustable through a range of 1 inch to infinity. The purpose of the rotating head camera is to view all new service connections and to locate any defects.

For manholes that may be difficult to access, the Contractor shall have available a self-propelled crawler transporter on which to mount the color television camera so as to be able to inspect the sewer as required.

Camera and lighting quality shall be suitable to provide a clear, continuously in-focus picture of

the entire inside periphery of the sewer pipe for all conditions encountered during the work. The camera shall be able to operate efficiently in 100% humidity conditions. The camera, television monitor and all other necessary components of the video system shall be capable of producing a minimum 350-line resolution color video picture.

The results of the sewer inspection shall be recorded on a narrated videotape and placed on a hard drive. Any out-of-focus video recordings or portions thereof, shall be cause for rejection of the video recording and will necessitate re-televising at the Contractors expense. Televising shall be done one section at a time. Each hard drive shall also be accompanied with an index.

The combined sewers to be televised as part of this pay item were cleaned and televised within the last two years and are assumed to be in good condition. This item shall include any cleaning that is necessary to televise the sewers according to the Specifications.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of PVC COMBINED SEWER PIPE REPLACEMENT, 15".

15" X 6" PVC SEWER SERVICE CONNECTIONS

This item shall include the 15" x 6" sewer service connections to be replaced. The Contractor will be required to connect the existing sewer services to the proposed sewer during the replacement of the existing sewer. The Contractor will replace the tee fitting, riser section of the service and the bend fitting used to level the existing service as part of this item. If the length of replacement pipe exceeds four feet (4'), then additional sewer service pipe will be paid for under SANITARY SEWER SERVICE 6".

The fittings and riser pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation F-679. The joints shall be rubber gasket and conform to ASTM designations D-3212 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction".

Basis of Payment: The work will be paid for at the Contract unit price per Each of 15" X 6" SEWER SERVICE CONNECTIONS.

CONCRETE RIBBON

This work shall include constructing Portland Cement Concrete ribbon curb. The ribbon curb shall be constructed in accordance with Section 606 of the Standard Specifications and the details for this item as shown on the Plans.

The ribbon curb shall be placed upon a compacted crushed stone bedding, Gradation CA-6, having a minimum thickness of two inches (2"). The cost for the 2" stone cushion shall be

included in this item.

The concrete ribbon curb will have a width of six inches (6”) and a depth of eleven and one half inches (11 ½”).

Between four (4) and twenty-four (24) hours after the curb has been placed, contraction joints two inches (2") in depth, shall be saw-cut at a maximum of a 15' spacing and at certain other locations as may be designated by the Engineer. These joints shall then be sealed according to the requirements of Article 420.14(a) of the “Standard Specifications for Road and Bridge Construction”.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of CONCRETE RIBBON.

STRUCTURAL SOIL

This work shall consist of furnishing, transporting and placing structural soil as specified herein, as shown on the Plans and details, or as directed by the Engineer.

The CU-Structural Soil® shall be produced by Midwest Trading / Phone: (630) 365-1990 / https://www.midwest-trading.com/product/cu-structural-soil/. -Structural Soil is a growth media designed to provide increased rooting volume for tree roots in plantings adjacent to pavement. Midwest Trading has met the strict qualifications and is licensed to produce CU-Structural Soil.

This item shall include excavation, non-woven needle punched filter fabric, and CU-Structural Soil. Once excavation is complete, filter fabric shall be placed with seams overlapping twelve inches (12”). The structural soil shall then be placed in six inch (6”) lifts and Maximum compaction must be obtained by Method 1 (mechanical compaction) as described in Article 550.07 of the “Standard Specifications for Road and Bridge Construction”.

Basis of Payment: The work will be paid for at the Contract unit price per Cubic Yard of STRUCTURAL SOIL.

WATER SERVICE LINE, DIRECTIONAL BORING, 1 – ½”

This item shall include the installation of water services to properties located on the opposite side of the street as the proposed water main. A corporation tap shall be made into the water main and 1 ½” copper water service pipe, Type K, shall be installed from the tap to a new curb stop (roundway complete with box) to be located as shown on the Plans. The 1 ½” tap shall be made with the specified saddle referenced herein the Specifications as directed by the Engineer, or as

otherwise approved. In conjunction with the work described above, the construction and payment for this item shall be the same as WATER SERVICE LINE 1" (BORED) except for the designated difference in the size of the service.

Basis of Payment: The work will be paid for at the Contract unit price per Each for WATER SERVICE LINE, DIRECTIONAL BORING, 1 – ½".

DUST CONTROL WATERING

This work shall consist of the exclusive control of dust resulting from construction operations. Dust shall be controlled by the uniform application of sprinkled water and shall be applied only when directed by the engineer, in a manner meeting their approval.

All equipment used for this work shall meet the Engineer's approval. The contractor will be responsible for obtaining a hydrant meter from the Village of Brookfield's Water Department. All water used shall be properly documented by ticket or other approved means. The Village of Brookfield shall designate locations where the Contractor may obtain water. This work will be measured in units of gallons of water applied. One unit will be equivalent to 1,000 gallons of water applied.

Basis of Payment: The work will be paid for at the Contract unit price per Unit of DUST CONTROL WATERING.

RESTRAINED JOINT 16"

At locations specified by the Engineer, 16" water main fittings shall be restrained by the use of EBBA Iron, Inc., Series 1100, MEGALUG, Retainer Gland. These retainer glands will only be paid for at locations where they have been specified by the Engineer. This item shall include all costs for providing the labor, equipment, and material necessary to furnish and install this item in accordance with the manufacturer's instructions.

Basis of Payment: This item shall be at the Contract unit price per Each for RESTRAINED JOINT 16".

WATER MAIN 8" (SPECIAL)

This work shall consist of the installation of 8" Ductile Iron Pipe, Class 52 water main by means of horizontal directional drilling (HDD).

Installation shall be done using the cartridge method, where the pipe connections and joints are assembled on-site during installation. All fittings shall be of the same material. The pipe shall be Ductile Iron Pipe, Class 52, cement-lined and zinc coated with a finished bituminous paint

layer, meeting the requirements of Specifications ANSI/AWWA C151/A21.51 with restrained joints (TR Flex or Flex Ring). The standard push-on joint gaskets shall be used with this restrained joint pipe. Gripping push-on joint gaskets or restrained joint gaskets are not permitted.

All DIP shall be installed per DIPRA's Horizontal Directional Drilling with Ductile Iron Pipe Handbook to include strict adherence to maximum joint deflection allowances.

The pipe shall be encased in two (2) layers of V-Bio Polyethylene Encasement per ANSI/AWWA C105/A21.5, unless otherwise directed by the Engineer. Where installed, polyethylene encasement shall be installed in the tightly wrapped manner or the alternate Method A for wet trench conditions. The initial piece of pipe will require that the polyethylene tube be securely attached to the pipe barrel with several circumferential wraps of tape from the end to approximately one foot in. The tape should be applied directly to both the polyethylene and the metal barrel of the pipe. When applying the polyethylene encasement to the assembled joint, the polyethylene overlap should always have the forward pipe's polyethylene tube overlap the next pipe's polyethylene. To secure the polyethylene at the joint area a plastic strap or tape should be snugly installed and circumferentially wrapped on each side of the joint.

The entrance and exit pits that are necessary to install the proposed ductile iron pipe water main using the horizontal directional drilling method shall be paid for separately under the respective items for LAUNCHING PIT and RECEIVING PIT. The approximate size and location of the entrance and exit pits are shown on the Plans but the actual sizes and locations of the pits shall be determined and agreed upon during construction by the Contractor and the Engineer. Any additional pits other than what is shown on the Plans that are necessary to ensure proper installation of the water main shall be included in the cost of this item.

The Contractor shall take precautions to protect the area where the drilling machine will be placed including the use of plywood and other materials. The cost for restoring any areas outside the limits of the pits will not be paid for separately but shall be considered to be included in the cost of this item.

Drilling Mud:

A mixture of Bentonite drilling clay, project specific cutting fluid additives, and potable water shall be used as the cutting fluid (MUD) and over ream hole filler for the Directional Bore. The drilling fluid mixture used shall have the following minimum viscosities as measured by a March Funnel:

Rock Clay	60 sec.
Hard Clay	40 sec.
Soft Clay	45 sec.
Sandy Clay	90 sec.

Stable Sand	120 sec.
Loose Sand	150 sec.
Wet Sand	150 sec.

These viscosities may be varied to best fit soil conditions encountered as recommended by the drilling mud and fluid additive manufacturer, and as approved by the Engineer. Any variations in the mixture composition, or specific fluid additives to the bentonite base such as a partially hydrolyzed polymer that are requested for use by the Contractor during the operation must be approved by the Engineer. All drilling fluids shall not enter the streets, manholes, sanitary and storm sewers, and other drainage systems, including streams and rivers.

Locating of existing utilities and services (gas, water and sewer) in advance of horizontal directional drilling will be required and is included in the cost of this item. The Contractor will only be allowed to hand dig or use a vacuum excavator to locate the existing utilities within the parkway or on the private property side of the sidewalk. **The combined sewer was televised within the last 5 years, and records can be obtained from the Engineer at the Contractor's request.**

Proper connection to the main to be installed within the trench at each end of the HDD operation shall be done within the entrance and exit pits and shall be included in the cost of this item.

Measurement of this item shall be from fitting to fitting as measured in a straight line.

This item shall include all costs for furnishing the labor, material, and equipment necessary to install the water main at the proper line and grade by means of horizontal directional drilling in accordance with the details shown on the Plans and as described in the Specifications.

Basis of Payment: This item shall be paid for at the Contract unit price per Foot for WATER MAIN 8" (SPECIAL).

LAUNCHING PIT

This item includes the excavation and installation of the entrance pit, also referred to as the launching pit, required to properly install the ductile iron pipe water main by means of horizontal directional drilling (HDD). The launching pit shall be defined as the starting point of the drilling operation and shall be the limit of HDD pipe installation that is nearest to the drilling rig.

The launching pit shall be used to stage drilling operations such as any necessary equipment placement, insertion of the drilling head at the appropriate depth, and collecting the reamer, swivel, pulling head, and any other accessories once the reaming and pull-back process has been completed.

The approximate size and location of the launching pit is shown on the Plans, but the actual size and location of the pit shall be determined and agreed upon during construction by the Contractor and the Engineer. The required depth of the pit based on the proposed water main elevation is shown on the Plans. The Contractor shall be responsible for determining the setback distance of the drilling rig in order to ensure the drilling head reaches the required depth, and the actual location of the rig shall be approved by the Engineer.

The pit shall be backfilled with Crushed Stone, IDOT Gradation CA-6 once the proper bedding and encasement has been placed around the pipe that is eventually installed at this location, and this work shall be included in the cost of this item.

This item shall include all labor, equipment, and materials required to excavate and install the launching pit, stage the appropriate drilling operations, installing and compacting the trench backfill in the pit once the pipe has been installed, and all other work necessary to complete the HDD operation by using this pit.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for LAUNCHING PIT.

RECEIVING PIT

This item includes the excavation and installation of the exit pit, also referred to as the receiving pit, required to properly install the ductile iron pipe water main by means of horizontal directional drilling (HDD). The receiving pit shall be defined as the end point of the drilling operation and shall be the limit of HDD pipe installation that is furthest from the drilling rig.

The receiving pit shall be used to collect the drilling head and install the reamer, swivel, and any other components necessary to attach and pull the pipe back toward the entrance pit. The individual pipe sections shall be lowered into this pit, where each pipe joint connection will be assembled by the cartridge method.

The approximate size and location of the receiving pit is shown on the Plans, but the actual size and location of the pit shall be determined and agreed upon during construction by the Contractor and the Engineer. The required depth of the pit based on the proposed water main elevation is shown on the Plans. The Contractor shall be responsible ensuring enough space to stage the proper pipe assembly.

The pit shall be backfilled with Crushed Stone, IDOT Gradation CA-6 once the proper bedding and encasement has been placed around the pipe that is eventually installed at this location, and this work shall be included in the cost of this item.

This item shall include all labor, equipment, and materials required to excavate and install the

receiving pit, stage the appropriate pipe assembly and pull-back operations, installing and compacting the trench backfill in the pit once the pipe has been installed, and all other work necessary to complete the HDD operation by using this pit.

Basis of Payment: This item shall be paid for at the Contract unit price per Each for RECEIVING PIT.

STORM SEWERS, CLASS B, TYPE 2, 6”

This item shall include the storm sewer that connects proposed PIPE UNDERDRAINS, TYPE 1, 6” to drainage structures located in the curb and gutter. In those locations indicated on the Plans, polyvinyl chloride (PVC) sewer pipe of the size indicated shall be installed. The pipe shall have a minimum standard dimension ratio (SDR) of 26 and shall conform to ASTM designation D-2241 (water quality pipe). The joints shall be rubber gasket and conform to ASTM designations D-3139 and F-477. Pipe installation shall be in accordance with Section 31 of the "Standard Specifications for Water and Sewer Main Construction". Connection to proposed underdrain shall be made with a 6” x 6” PVC wye fitting paid under STORM SEWER CONNECTION.

All pavement removal, excavation, and removal of existing pipe shall be included under this item. The pipe bedding and backfill to twelve inches (12") above the top of pipe will also be included in this item. Pipe bedding and backfill shall be Gradation CA-7.

Basis of Payment: The work will be paid for at the Contract unit price per Foot of STORM SEWER, CLASS B, TYPE 2, 6”.

CHECK VALVE, 8”

This item shall include the furnishing and installation of the eight inch (8”) CheckMate® UltraFlex® Inline Check Valve by Tideflex, complete and operable as shown and as specified herein, in accordance with the requirements of the Plans and contract documents.

Check valves are to be all rubber and the flow operated check type with slip-in cuff connection. The entire valve shall be ply reinforced throughout the body, saddle and bill, which is cured and vulcanized into a one-piece unibody construction. A separate valve body or pipe used as the housing is not acceptable.

When line pressure exceeds the backpressure, the line pressure forces the bill and saddle of the valve open, allowing flow to pass. When the backpressure exceeds the line pressure, or in the absence of any upstream or downstream pressure, the bill and saddle of the valve is forced closed, preventing backflow.

The valve shall be manufactured with no metal, mechanical hinges or fasteners, which would be

used to secure any component of the valve to a valve housing. The port area of the saddle shall contour into a circumferential sealing area concentric with the pipe which shall allow passage of flow in one direction while preventing reverse flow. The entire valve shall fit within the pipe inside diameter. The saddle area of the valve must be flat, not conical, and integral with the rubber body above centerline in order to not produce any areas or voids that can collect or trap debris. Once installed, the valve shall not protrude beyond the face of the structure or end of the pipe.

The outside diameter of the upstream and downstream sections of the valve must be circumferentially in contact with the inside diameter of the pipe.
Slip-in style check valves will be furnished with a set of stainless steel expansion clamps. The clamps, which will secure the valve in place, shall be installed in the upstream or downstream cuff of the valve, depending on installation orientation, and shall expand outwards by means of a turnbuckle. Each band shall be pre-drilled allowing for the valve to be pinned and secured into position in accordance with the manufacturer's installation instructions.
Company name, plant location, valve size patent number, and serial number shall be bonded to the check valve. All valves shall be manufactured in the U.S.A.

Basis of Payment: The work will be paid for at the Contract unit price per Each for CHECK VALVE, 8".

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

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

Contract Specific 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.

Boring 10, Prairie Avenue

Station 26+10 to Station 29+00 (CL Street), 0 to 18 feet LT, 0 to 18 feet RT. The Engineer has determined this material meets the criteria of and shall be managed in accordance with Article 669.05(a)(5). Potential contaminants of concern sampling parameters: VOCs, SVOCs, and Metals.

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 med necessary. For this project, the work zones apply for the following ISGS PESA Sites:
None

ROADWAY LIGHTING SPECIAL PROVISIONS

General Electrical Requirements

Effective: November 1, 2025
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 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

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 Department 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 CCTV Cabinets Communication vaults Heavy Duty Handhole
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 associated supports Radar detection Cabinets for surveillance equipment Data Probing Handholes Dynamic Message Signs (DMS) Fiber optic cable Fiber optic duct Fiber Optic Splices Fiber Optic Termination Fiber Optic Utility Marker Network equipment
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

Discipline	Typical Items
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 Department.

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 State. 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, and temporary 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 Department, 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 Department.

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 Department.

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
- Detector Loop Tests

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.

Surveillance. The following tests shall be made in addition to the lighting system test above.

(1) Detector Loops. Before and after permanently securing the loop in the pavement, the resistance, inductance, resistance to ground, and quality factor for each loop and lead-in circuit shall be tested.

(2) The loop and lead-in circuit shall have an inductance between 20 and 2500 microhenries.

(3) The resistance to ground shall be a minimum of 50 megohms under any conditions of weather or moisture.

(4) The continuity test of the loop and loop lead-in shall not have a resistance greater than two (2) ohms

(5) The quality factor (Q) shall be 5 or greater.

Loops which fail to test satisfactorily shall be repaired or replaced.
Telecommunication Cable. Once the telecommunication cable is installed complete with all cable terminations complete the Contractor shall request an end-to-end test. The Contractor shall request the end-to-end test at least 7 days in advance to the TSC Engineer. Any lane closures and/or any other safety measures that need to be taken shall be provided for by the Contractor

and shall be considered incidental to the cost of this item. The type of test performed shall be an end-to-end test with Halcyon type equipment transmitting and receiving at each end of the cable. Each pair shall be tested, and the results shall be recorded and submitted to the Engineer. If any results don't fall within the requirements set forth in (REA) PE-39, the Contractor shall correct and re-test that cable pair. Traffic Systems will tolerate only one pair out of every 100 pair of cable that doesn't meet or exceed specifications set forth in (REA) PE-39.

Wireless In-Pavement Detection Systems shall be tested in accordance with the approved testing procedures provided in the catalog cut submittal.

Fiber Optic Systems.

The Contractor shall submit detailed test procedures for approval by the Engineer. All fibers (terminated and un-terminated) shall be tested bi-directionally at both 1310 nm and 1550 nm with both an Optical Time Domain Reflectometer (OTDR) and a power meter with an optical source. For testing, intermediate breakout fibers may be concatenated and tested end-to-end. Any discrepancies between the measured results and these specifications will be resolved to the satisfaction of the Engineer.

Fibers which are not to be terminated shall be tested with a temporary fusion spliced pigtail fiber. **Mechanical splice or bare fiber adapters are not acceptable**.

The Contractor shall provide the date, time and location of any tests required by this specification to the Engineer at least 5 working (7 calendar) days before performing the test. Included with the notification shall be a record drawing of the installed fiber optic cable system. The drawings shall indicate actual installed routing of the cable, the locations of splices, and locations of cable slack with slack quantities identified.

Upon completion of the cable installation, splicing, and termination, the Contractor shall test all fibers for continuity, events above 0.1 dB, and total attenuation of the cable. The test procedure shall be as follows:

A Certified Technician utilizing an Optical Time Domain Reflectometer (OTDR) and Optical Source/Power Meter shall conduct the installation test. The test equipment used shall have been calibrated within the last two years. Documentation shall be provided. The Technician is directed to conduct the test using the standard operating procedures defined by the manufacturer of the test equipment. All fibers installed shall be tested in both directions.

A fiber ring or fiber box shall be used to connect the OTDR to the fiber optic cable under test at both the launch and receive ends. The tests shall be conducted at 1310 and 1550 nm for all fibers.

All testing shall be witnessed by the IDOT Engineer, and a copy of the test results (CD ROM or USB Drive) shall be submitted on the same day of the test. Hardcopies shall be submitted as described herein with copies on CD ROM or USB Drive.
At the completion of the test, the Contractor shall provide copies of the documentation of the test results to the Project Engineer. The test documentation shall be submitted as two bound copies and three CD ROM, or USB drive copies, and shall include the following:

Cable & Fiber Identification:

- Cable ID
- Cable Location - beginning and end point
- Fiber ID, including tube and fiber color
- Wavelength
- Pulse width (OTDR)
- Refractory index (OTDR)
- Operator Name
- Date & Time
- Setup Parameters
- Range (OTDR)
- Scale (OTDR)
- Setup Option chosen to pass OTDR “dead zone”

Test Results shall include:

- OTDR Test results
- Total Fiber Trace
- Splice Loss/Gain
- Events > 0.10 dB
- Measured Length (Cable Marking)
- Total Length (OTDR)
- Optical Source/Power Meter Total Attenuation (dB/km)

Sample Power Meter Tabulation:

Power Meter Measurements (dB)									
Location		**Fiber No.**	**Cable Length (km)**	**A to B**		**B to A**		**Bidirectional Average**	
A	**B**			**1310 nm**	**1550 nm**	**1310 nm**	**1550 nm**	**1310 nm**	**1550 nm**
		1							
		2							
Maximum Loss									
Minimum Loss									

The OTDR test results file format must be Bellcore/Telcordia compliant according to GR-196-CORE Issue 2, OTDR Data Standard, GR 196, Revision 1.0, GR 196, Revision 1.1, GR 196, Revision 2.0 (SR-4731) in a ".SOR" file format. A copy of the test equipment manufacture's software to read the test files, OTDR and power, shall be provided to the Department. These results shall also be provided in tabular form, see sample below:

Sample OTDR Summary				
Cable Designation:	*TCF-IK-03*	**OTDR Location:**	*Pump Sta. 67*	**Date:** *1/1/00*
Fiber Number	**Event Type**	**Event Location**	**Event Loss (dB)**	
			1310 nm	**1550 nm**
1	*Splice*	*23500 Ft.*	*.082*	*.078*
1	*Splice*	*29000 Ft.*	*.075*	*.063*
2	*Splice*	*29000 Ft.*	*.091*	*.082*
3	*Splice*	*26000 Ft.*	*.072*	*.061*
3	*Bend*	*27000 Ft.*	*.010*	*.009*

The following shall be the criteria for the acceptance of the cable:

Upon completing all splicing operations for a cable span, the Contractor shall measure the mean bi-directional loss at each splice using an Optical Time Domain Reflectometer.

When splices are made between identical cables (same manufacturer and cable type) the average optical loss of each splice shall not exceed 0.10 dB. The average is determined by measuring the splice loss in both directions with an OTDR, adding the two readings, and dividing by two. Testing should be performed for both the 1310 and 1550 nm wavelengths. No individual splice

loss measured in a single direction shall exceed 0.15 dB.

When splices are made between cables containing fibers of different mode field diameters, the average optical loss of each splice shall not exceed 0.50 dB. The average is determined by measuring the splice loss in both directions with an OTDR, adding the two readings, and dividing by two. Testing should be performed for both the 1310 and 1550 nm wavelengths. No individual splice loss measured in a single direction shall exceed 0.6 dB.

The Contractor shall measure the end-to-end attenuation of each fiber, from connector to connector, using an optical power meter and source. This loss shall be measured at from both directions and shall not exceed 0.5 dB per installed kilometer of single mode cable. Measurements shall be made at both 1300 and 1550 nm for single mode cable.

For multimode cable, power meter measurements shall be made at 850 and 1300 nm. The end-to-end attenuation shall not exceed 3.8 dB/installed kilometers at 850nm or 1.8 dB per installed kilometer at 1300nm for multimode fibers.

If the total loss exceeds these specifications, the Contractor shall replace or repair the cable run at the no additional cost to the state, both labor and materials. Elevated attenuation due to exceeding the pulling tension, or any other installation operation, during installation shall require the replacement of the cable run at no additional cost to the State, including labor and materials.

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 Department.

(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.

The warranty for an uninterruptable power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years.

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
- The Electrical Maintenance Contract Management System (EMCMS) location designation, i.e. “L”, “TS”, “S”, “A” number.
- 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 Installation and 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.

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
FDSRD000	Record Drawings - Surveillance	Surveillance
FDTRD000	Record Drawings - Traffic Signal	Traffic Signal
FDIRD000	Record Drawings - ITS	ITS
FDLCC000	Catalog Cuts - Lighting	Lighting
FDSCC000	Catalog Cuts – Surveillance	Surveillance
FDTCC000	Catalog Cuts – Traffic Signal	Traffic Signal
FDICC000	Catalog Cuts - ITS	ITS
FDLWL000	Warranty - Lighting	Lighting
FDSWL000	Warranty - Surveillance	Surveillance
FDTWL000	Warranty - Traffic Signal	Traffic Signal
FDIWL000	Warranty - ITS	ITS
FDLTR000	Test Results - Lighting	Lighting
FDSTR000	Test Results - Surveillance	Surveillance
FDTTR000	Test Results - Traffic Signal	Traffic Signal
FDITR000	Test Results - ITS	ITS
FDLINV00	Inventory - Lighting	Lighting
FDSINV00	Inventory - Surveillance	Surveillance
FDTINV00	Inventory - Traffic Signal	Traffic Signal
FDIINV00	Inventory - ITS	ITS
FDLGPS00	GPS - Lighting	Lighting
FDSGPS00	GPS - Surveillance	Surveillance
FDTGPS00	GPS - Traffic Signal	Traffic Signal
FDIGPS00	GPS - ITS	ITS
FDLES00	Electric Service - Lighting	Lighting
FDSES00	Electric Service - Surveillance	Surveillance
FDTES00	Electric Service - Traffic Signal	Traffic Signal
FDIES00	Electric Service - ITS	ITS

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, fiber optic OTDR, and Fiber Optic power meter as applicable for each discipline.

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.
- CCTV Camera installations.
- Roadway Surveillance installations.
- Fiber Optic Splice Locations.
- Fiber Optic Cables. Coordinates shall be recorded along each fiber optic cable route every 200 feet.
- Fiber Optic Utility Markers
- All fiber optic slack locations shall be identified with quantity of slack cable included. When sequential cable markings are available, those markings shall be documented as cable marking into enclosure and marking out of enclosure.
- All wireless in-pavement vehicle detectors

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

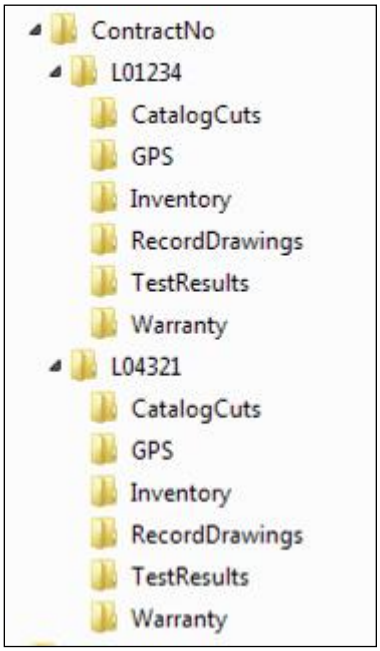
A spreadsheet template will be available from the Engineer for use by the Contractor.

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 documents shall be organized by the Electrical Maintenance Contract Management System (EMCMS) location designation. If multiple EMCMS locations are within the contract, separate folders shall be utilized for each location as follows:



Extraneous information not pertaining to the specific EMCMS location shall not be included in that particular folder and sub-folder.

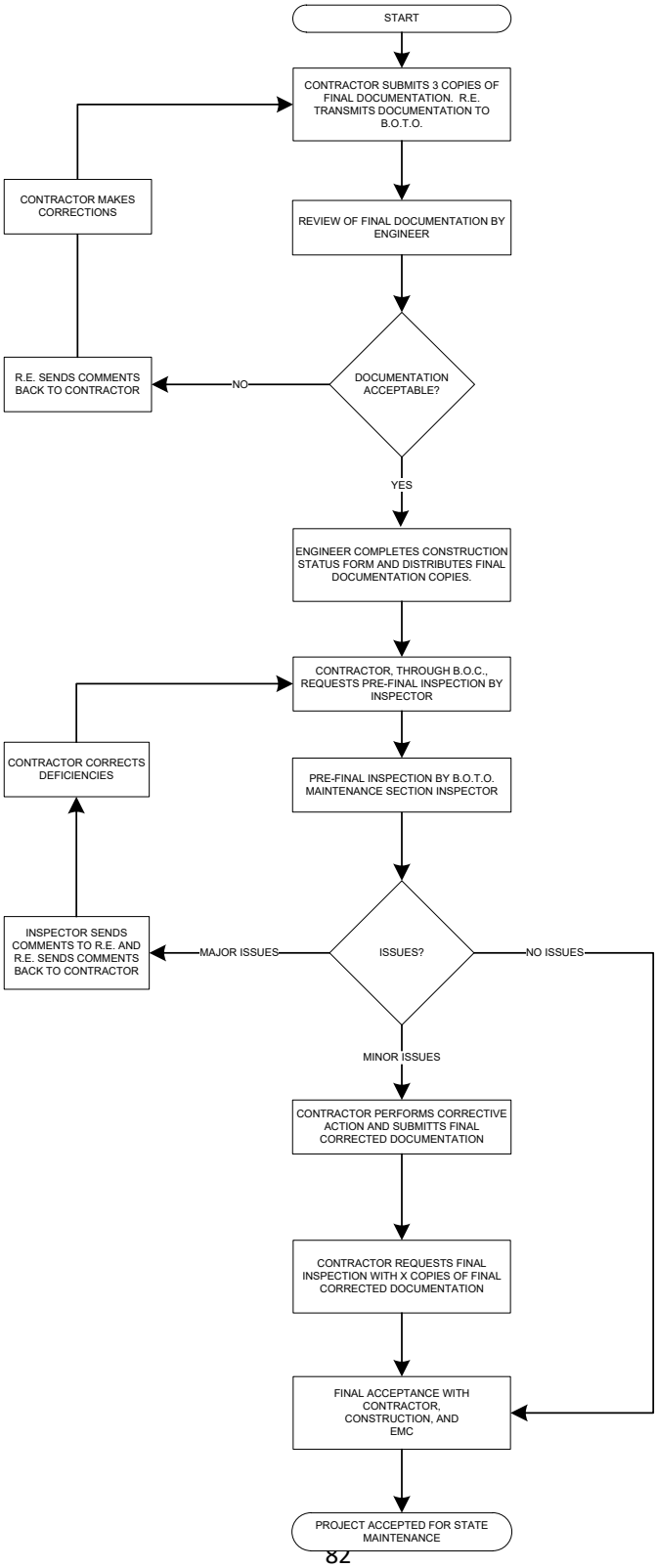
The inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.

The Final Acceptance Documentation Checklist shall be completed and is contained elsewhere herein.

Acceptance. Acceptance of electrical work will be given at the time when the Department 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.


START
CONTRACTOR SUBMITS 3 COPIES OF FINAL DOCUMENTATION. R.E. TRANSMITS DOCUMENTATION TO B.O.T.O.
REVIEW OF FINAL DOCUMENTATION BY ENGINEER
DOCUMENTATION ACCEPTABLE?
NO
R.E. SENDS COMMENTS BACK TO CONTRACTOR
CONTRACTOR MAKES CORRECTIONS
YES
ENGINEER COMPLETES CONSTRUCTION STATUS FORM AND DISTRIBUTES FINAL DOCUMENTATION COPIES.
CONTRACTOR, THROUGH B.O.C., REQUESTS PRE-FINAL INSPECTION BY INSPECTOR
PRE-FINAL INSPECTION BY B.O.T.O. MAINTENANCE SECTION INSPECTOR
ISSUES?
MAJOR ISSUES
INSPECTOR SENDS COMMENTS TO R.E. AND R.E. SENDS COMMENTS BACK TO CONTRACTOR
CONTRACTOR CORRECTS DEFICIENCIES
NO ISSUES
MINOR ISSUES
CONTRACTOR PERFORMS CORRECTIVE ACTION AND SUBMITTS FINAL CORRECTED DOCUMENTATION
CONTRACTOR REQUESTS FINAL INSPECTION WITH X COPIES OF FINAL CORRECTED DOCUMENTATION
FINAL ACCEPTANCE WITH CONTRACTOR, CONSTRUCTION, AND EMC
PROJECT ACCEPTED FOR STATE MAINTENANCE

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 (for cabinets) -PDFs as required elsewhere	☐ ☐	☐ ☐
Field Inspection Tests -Voltage -Amperage -Cable Insulation Resistance -Continuity -Controller Ground Rod Resistance (PDFs as required)	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
GPS Coordinates -Excel file (Check Special Provisions, Excel file required.)	☐	☐
Job Warranty Letter (PDFs as required)	☐	☐
Catalog Cut Submittals -Approved & Approved as Noted (PDFs as required)	☐	☐
Lighting Inventory Form (PDFs as required)	☐	☐
Lighting Controller Inventory Form (PDFs as required)	☐	☐
Electric Service Documentation (PDFs as required)	☐	☐
Light Tower Inspection Form (If applicable, PDFs as required)	☐	☐

PDFs as required shall be submitted for all items above.
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. Coordinates in Latitude and Longitude, decimal degrees.

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.

MAINTENANCE OF LIGHTING SYSTEMS

Effective: November 1, 2025

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 Section109.04.

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, including combination traffic signal lighting, 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 a given 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 a given 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, part of a lighting system, combination traffic signal lighting, 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.

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. 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	N/A	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	N/A
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	N/A
Outage of 75% of lights on one tower	1 hour	4 hours	N/A
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	N/A
Outage (single or multiple) found on night outage survey or reported to EMC	N/A	N/A	7 Calendar days
Navigation light outage	N/A	N/A	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.**

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

ROADWAY LUMINAIRE, LED

Effective: November 1, 2025

Description.

This work shall consist of furnishing and installing a roadway LED luminaire as shown on the plans, as specified herein.

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. lsofootcandle 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.

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.

Material. The luminaire shall be a single device not requiring onsite 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 gray, unless otherwise indicated.

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 to1000 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 (EPA) of the luminaire shall not exceed 1.6 sq ft (0.149 sq m) and the weight, including accessories, shall not exceed 40 lb (18.14 kg). **If the weight of the**

luminaire is less than 20 lb (9.07 kg), weight shall be added to the mounting arm or a supplemental vibration damper installed as approved by the Engineer.

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

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

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

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. 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, 4,000°K color temperature (+/-300°K) LEDs binned in accordance with ANSI C78.377. Lenses shall be UV-stabilized acrylic or glass.

The actual measured luminous flux output shall be within +/- 10% of the published lumen value.

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).

When the quantity of luminaires requires independent testing, the AGi32 calculation file used for performance verification shall also be submitted with the initial submittal.

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	36	Ft
	Number of Lanes Left of Median	1	
	Number of Lanes Right of Median	1	
	Lane Width	11.0	Ft
	Median Width	0	Ft
	IES Surface Classification	R3	
	Q-Zero Value	0.07	
Mounting Data	Mounting Height	24	Ft
	Mast Arm Length	8	Ft
	Pole Set-Back from Edge of Pavement	4.5	Ft
Luminaire Data	Source	LED	
	Color Temperature	4000	°K
	Lumens	11,601	Min
	Pay Item Lumen Designation	D	
	BUG Rating	B2U0G2	
	IES Vertical Distribution	Medium	
	IES Control of Distribution	Cut-off	
	IES Lateral Distribution	Type 2	
	Total Light Loss Factor	0.75	
Pole Layout Data	Spacing	150	Ft
	Configuration	staggered	
	Luminaire Overhang over E.O.P.	-2.5’	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)	1.54	Cd/m^2
	Average Luminance, L_{AVE} (Min)	0.45	Cd/m^2
	Uniformity Ratio, L_{AVE}/L_{MIN}	1.80	Max
	Uniformity Ratio, L_{MAX}/L_{MIN}	3.42	Max
	Veiling Luminance Ratio, L_V/L_{AVE}	0.01	Max

IDOT DISTRICT 1 LUMINAIRE PERFORMANCE TABLE
ROADWAY LIGHTING

GIVEN CONDITIONS

Roadway Data	Pavement Width	36	Ft
	Number of Lanes Left of Median	1	
	Number of Lanes Right of Median	1	
	Lane Width	11.0	Ft
	Median Width	0	Ft
	IES Surface Classification	R3	
	Q-Zero Value	0.07	
Mounting Data	Mounting Height	12	Ft
	Mast Arm Length	2	Ft
	Pole Set-Back from Edge of Pavement	4.5	Ft
Luminaire Data	Source	LED	
	Color Temperature	4000	°K
	Lumens	8692	Min
	Pay Item Lumen Designation	D	
	BUG Rating	B2U0G2	
	IES Vertical Distribution	Medium	
	IES Control of Distribution	Cut-off	
	IES Lateral Distribution	Type 2	
	Total Light Loss Factor	0.75	
Pole Layout Data	Spacing	60	Ft
	Configuration	staggered	
	Luminaire Overhang over E.O.P.	-2.5’	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)	1.67	Cd/m^2
	Average Luminance, L_{AVE} (Min)	0.41	Cd/m^2
	Uniformity Ratio, L_{AVE}/L_{MIN}	1.85	Max
	Uniformity Ratio, L_{MAX}/L_{MIN}	4.07	Max
	Veiling Luminance Ratio, L_V/L_{AVE}	0.01	Max

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. The color temperature shall be within +/- 300°K of the submitted factory values. The measured lumen output of the luminaire shall be within +/- 10% of the submitted factory value. 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 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.

REMOVAL OF LIGHTING UNIT, NO SALVAGE

This item shall include the removal of existing lighting units at locations indicated on the plans and as directed by the engineer. Existing lighting units are to be disposed of by the contractor which will be included in the cost of this item.

Payment for this item shall be made the contract unit price per EACH for REMOVAL OF LIGHTING UNIT, NO SALVAGE, which price shall include all costs for removal and disposal of existing lighting units in accordance with these specifications.

ELECTRICAL CONNECTION TO EXISTING LIGHTING SYSTEM

This item shall involve the connection of the new unit duct to the existing lighting system at the locations indicated on the plans and as directed by the Engineer.

The proposed unit duct wires shall extend within the raceway into the base of the pole where they will be spliced into the existing circuit within the pole.

Payment for this item shall be made at the contract unit price per Each for ELECTRICAL CONNECTION TO EXISTING LIGHTING SYSTEM, which price shall include all costs for furnishing the required labor, materials and equipment necessary to complete the item in accordance with these specifications.

LIGHT POLE, SPECIAL, 12’

This item includes the installation of a 12’ mounting height pole, mast arm, luminaire and accessories.

Work shall be in accordance with Section 830 insofar as applicable, modified herein and as detailed on the Plans.

Each pole will have a mast arm, luminaire, gfci outlet, banner arms, double planter arms, with a decorative two piece base.

The pole shall be Sternberg Model 6215FP5-.250/BCC3/GFI LPIUC/BDBA6-18"/DHPA/BK.

The Luminaire shall be Sternberg Omega Model 1521LED-F-16L40T2-MDL018-FG SV1-EZ/480UHBPMR as directed by the engineer.

Payment for this item shall be made at the contract unit price per Each for LIGHT POLE, SPECIAL, 12' which price shall include all costs for furnishing the required labor, materials and equipment necessary to complete the item in accordance with these specifications and detail shown in plans.

ORNAMENTAL LIGHT POLE, ALUMINUM WITH CONTEMPORARY ARM

This item includes the installation of a 24' mounting height pole, mast arm, luminaires and accessories.

Work shall be in accordance with Section 830 insofar as applicable, modified herein and as detailed on the Plans.

Each pole will have a mast arm, 2 luminaires with a decorative two-piece base.

The pole shall be Sternberg Model 6925ARTS-.250/BCC4/GFI LPIUC/BK.

The Luminaire shall be Sternberg Omega Model 15311ED-F-32L40T2-MDL018-FG-HSHB/CAS8/1AM and Omega Model 1521LED-F-16L40T2-MDL018-FG SV1-EZ/480UHBPMR/69.

Payment for this item shall be made at the contract unit price per Each for ORNAMENTAL LIGHT POLE, ALUMINUM WITH CONTEMPORARY ARM which price shall include all costs for furnishing the required labor, materials and equipment necessary to complete the item in accordance with these specifications and detail shown in plans.

LIGHT POLE (SPECIAL)

This item includes the installation of a 24' mounting height pole, mast arm, luminaires and accessories.

Work shall be in accordance with Section 830 insofar as applicable, modified herein and as detailed on the Plans.

Each pole will have a mast arm, 1 luminaire with a decorative two-piece base.

The pole shall be Sternberg Model 6925ARTS-.250/BCC4/GFI LPIUC/BK.

The Luminaire shall be Sternberg Omega Model 1531LED-F-24L40T2-MDL014-FG-HSHB/CAS8/1AM

Payment for this item shall be made at the contract unit price per Each for LIGHT POLE (SPECIAL) which price shall include all costs for furnishing the required labor, materials and equipment necessary to complete the item in accordance with these specifications and detail shown in plans.

ELECTRIC SERVICE INSTALLATION AND CONNECTION
Effective: August 1, 2025

Description. This item shall consist of all material and labor required to extend, connect or modify the electric service, as indicated or specified, which is over and above the work performed by the Electric Service Provider (Utility Company). This item shall also consist of reimbursement for work performed by the Electric Service Provider in providing or modifying electric service as indicated.

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 Electric Service Provider 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.

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.

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 Measurement. Electric Service Installation and Connection shall be counted, each.

Basis Of Payment.

Any charges by the Electric Service Provider shall be approved by the Engineer and paid for as an addition to the Contract according to Article 109.05 of the Standard Specifications.

This work will be paid for at the contract price each for **ELECTRIC SERVICE INSTALLATION AND CONNECTION** which shall be payment in full for the work specified herein, excluding utility reimbursement.

PUBLIC CONVENIENCE AND SAFETY (D-1)

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."

COMPLETION DATE PLUS WORKING DAYS (D-1)

Effective: September 30, 1985
Revised: January 1, 2007

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

> "When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on, October 16, 2027 except as specified herein.
>
> The Contractor will be allowed to complete all clean-up work and punch list items within 15 working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.
>
> (*The completion date for this project shall be October 16, 2027.)"

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

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS (D-1)

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."

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.

	Voids in the Mineral Aggregate (VMA), % Minimum for Ndesign				
Mix Design	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 (Gmm) will be the Department mix design verification test result."

Add after third sentence of Article 1030.09(b) to read:

" If the Contractor and Engineer agree the nuclear density test method is not appropriate for the mixture, cores shall be taken at random locations determined according to the QC/QA document "Determination of Random Density Test Site Locations". Core densities shall be determined using the Illinois Modified AASHTO T 166 or T 275 procedure."

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

	Breakdown/Intermediate Roller (one of the following)	Final Roller (one or more of the following)	Density Requirement
IL-9.5, IL-9.5FG, IL-19.0 1/	V_D, P , T_B, 3W, O_T, O_B	V_S, T_B, T_F, O_T	As specified in Section 1030
IL-4.75 and SMA 3/ 4/	T_B, 3W, O_T	T_F, 3W	As specified in Section 1030
Mixtures on Bridge Decks 2/	T_B	T_F	As specified in Articles 582.05 and 582.06.

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

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

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

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

"A test strip of 300 ton (275 metric tons), except for SMA mixtures it will be 400 ton (363 metric ton), will be required for each mixture on each contract at the beginning of HMA production for

each construction year according to the Manual of Test Procedures for Materials "Hot Mix Asphalt Test Strip Procedures". At the request of the Producer, the Engineer may waive the test strip if previous construction during the current construction year has demonstrated the constructability of the mix using Department test results."

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

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

ADJUSTMENTS AND RECONSTRUCTIONS (D-1)

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 (D-1)

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."

TRAFFIC CONTROL AND PROTECTION (ARTERIALS) (D-1)

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.

TRAFFIC CONTROL PLAN (D-1)

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:

701006-05, 701011-04, 701101-05, 701301-04, 701311-03, 701501-06, 701502-09, and 701901-11

DETAILS (included in Plans):

(TC-10) Traffic Control and Protection for Side Roads, Intersections, and Driveways
(TC-13) District One Typical Pavement Markings
(TC-16) Short Term Pavement Marking Letters and Symbols
(TC-21) Detour Signing for Closing State Highways
(TC-22) Arterial Road Information Sign
(TC-26) Driveway Entrance Signing

SPECIAL PROVISIONS:

Maintenance of Roadways (D1)
Public Convenience and Safety (D1)
Traffic Control and Protection (Arterials) (D1)
Temporary Information Signing (D1)
Keeping Arterial Roadway Open to Traffic (Lane Closures Only)
Pavement and Shoulder Resurfacing (Recurring Special Provisions, CS#13)
Short Term and Temporary Pavement Markings (BDE)
Vehicle and Equipment Warning Lights (BDE)
Work Zone Traffic Control Devices (BDE)
Work Zone Width Restriction (BDE)

KEEPING ARTERIAL ROADWAYS OPEN TO TRAFFIC (LANE CLOSURES ONLY)

Effective: January 22, 2003
Revised: August 10, 2017
701.08Ta

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 7:30AM to 9:30AM and 3:30PM to 6:30PM.

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 = $ 1,000.00

Two lanes blocked = $ 2,500.00

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.

FRICTION AGGREGATE (D-1)

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	Allowed Alone or in Combination [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	Allowed Alone or in Combination [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	Allowed Alone or in Combination [5/ 6/]: Crushed Gravel Carbonate Crushed Stone[2/] Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete[3/]
HMA High ESAL Low ESAL	C Surface and Binder IL-9.5 IL-9.5FG or IL-9.5L	Allowed Alone or in Combination [5/]: Crushed Gravel Carbonate Crushed Stone[2/] Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag[4/] Crushed Concrete[3/]

<table>
<tr><th>Use</th><th>Mixture</th><th colspan="2">Aggregates Allowed</th></tr>
<tr><td rowspan="5">HMA
High ESAL</td><td rowspan="5">D Surface and Binder
IL-9.5
or IL-9.5FG</td><td colspan="2"><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/]</td></tr>
<tr><td colspan="2"><u>Other Combinations Allowed:</u></td></tr>
<tr><td>Up to...</td><td>With...</td></tr>
<tr><td>25% Limestone</td><td>Dolomite</td></tr>
<tr><td>50% Limestone</td><td>Any Mixture D aggregate other than Dolomite</td></tr>
<tr><td>75% Limestone</td><td>Crushed Slag (ACBF) or Crushed Sandstone</td></tr>
<tr><td rowspan="5">HMA
High ESAL</td><td rowspan="5">E Surface
IL-9.5

SMA
Ndesign 80
Surface</td><td colspan="2"><u>Allowed Alone or in Combination</u> [5/ 6/]:

Crushed Gravel
Crystalline Crushed Stone
Crushed Sandstone
Crushed Slag (ACBF)
Crushed Steel Slag

No Limestone.</td></tr>
<tr><td colspan="2"><u>Other Combinations Allowed:</u></td></tr>
<tr><td>Up to...</td><td>With...</td></tr>
<tr><td>50% Dolomite[2/]</td><td>Any Mixture E aggregate</td></tr>
<tr><td>75% Dolomite[2/]</td><td>Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone</td></tr>
</table>

<table>
<tr><td>Use</td><td>Mixture</td><td colspan="2">Aggregates Allowed</td></tr>
<tr><td></td><td></td><td>75% Crushed Gravel[2/]</td><td>Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag</td></tr>
<tr><td rowspan="4">HMA
High ESAL</td><td rowspan="4">F Surface
IL-9.5

SMA
Ndesign 80
Surface</td><td colspan="2"><u>Allowed Alone or in Combination</u> [5/ 6/]:

Crystalline Crushed Stone
Crushed Sandstone
Crushed Slag (ACBF)
Crushed Steel Slag
No Limestone.</td></tr>
<tr><td colspan="2"><u>Other Combinations Allowed</u>:</td></tr>
<tr><td>Up to...</td><td>With...</td></tr>
<tr><td>50% Crushed Gravel[2/] or Dolomite[2/]</td><td>Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone</td></tr>
</table>

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."

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 (CO_2) mineralization or an equivalent effect at the Contractor's option.

Materials. Materials shall be according to the following.

Item	Article/Section
(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 CO_2 mineralization, or an equivalent effect shall utilized.

Note 2: The admixture which promotes CO_2 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 CO_2 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 CO_2 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 CO_2 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 CO_2 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.

HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (D-1)

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."

TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996
Revised: January 29, 2020
701.06T

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:

	Item	Article/Section
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 for TEMPORARY INFORMATION SIGNING.

DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION (ROADWAY GRINDING, RESURFACING, & PATCHING OPERATIONS)

Effective: January 1, 1985
Revised: March 1, 2024
886.02TS

The following Traffic Signal Special Provisions and the "District 1 Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction" Sections 810, 886, 1079 and 1088.

The intent of this Special Provision is to prescribe the materials and construction methods commonly used to replace traffic signal detector loops and replace magnetic signal detectors with detector loops during roadway resurfacing, grinding and patching operations. Loop detector replacement will not require the transfer of traffic signal maintenance from the District Electrical Maintenance Contractor to this Contract's electrical contractor. Replacement of magnetic detector will require wiring revisions inside the control cabinet and therefore the transfer of maintenance will be required. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer.

The work to be provided under the Contract consists of furnishing and installing all traffic signal work as specified on the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Notification of Intent to Work.
Contracts such as pavement grinding or patching which result in the destruction of traffic signal detection require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the detection removal, the Contractor shall notify the Area Traffic Signal Maintenance and Operations Engineer.connection
Failure to provide proper notification may require the District's Electrical Maintenance Contractor to be called to investigate complaints of inadequate traffic signal timing. All costs associated with these expenses will be paid for by the Contractor at no additional expense to the Department according to Section 109 of the Standard Specifications.

Removal, Disposal and Salvage of Existing Traffic Signal Equipment.
The removal, disposal, and salvage of existing traffic signal equipment shall be included in the cost of this item. All material and equipment removed shall become the property of the Contractor and disposed of by the Contractor outside the State's right-of-way. No additional compensation shall be provided to the Contractor for removal, disposal or salvage expense for the work in this contract.

DETECTOR LOOP REPLACEMENT.
This work shall consist of replacing existing detector loops which are destroyed during grinding, resurfacing, or patching operations.

If damage to the detector loop is unavoidable, replacement of the existing detection system will be necessary. This work shall be completed by an approved Electrical Contractor as directed by the Engineer.

Replacement of the loops shall be accomplished in the following manner: The Area Traffic Signal Maintenance and Operations Engineer shall be called to approve loop locations prior to the cutting of the pavement. The Contractor may reuse the existing coilable non-metallic conduit (CNC) located between the existing handhole and the pavement if it hasn't been damaged. CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways to the handholes. All burrs shall be removed from the edges of the existing conduit which could cause damage to the new detector loop during installation. If the existing conduit is damaged beyond repair, if it cannot be located, or if additional conduits are required for each proposed loop, the Contractor shall be required to drill through the existing pavement into the appropriate handhole and install 1 in. (25 mm) CNC. This work and the required materials shall not be paid for separately but shall be included in the pay item Detector Loop Replacement. Once suitable CNC raceways is established, the loop may be cut, installed, sealed and spliced to the twisted-shielded lead-in cable in the handhole.

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

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the Area Traffic Signal Maintenance and Operations Engineer to inspect and approve the layout.

Loop detectors shall be installed according to the requirements of the "District 1 Standard Traffic Signal Design Details." Saw-cuts 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 unless directed otherwise by the Engineer or as shown on the plan.

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. The lead-in wire, including all necessary connections for proper operation, from the edge of pavement to the handhole, shall be included in the detector loop pay item.

Loop sealant shall be a two-component thixotropic chemically cured polyurethane. 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.

Round loop(s) 6 ft (1.8 m) in diameter may be substituted for 6 ft (1.8 m) x 6 ft (1.8 m) square loop(s) and shall be paid for as 24 ft (7.2 m) of detector loop.

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.

Heat shrink splices shall be used according to the "District 1 Standard Traffic Signal Design

Details."

Detector loop replacement shall be measured along the sawed slot in the pavement containing the loop cable up to the edge of pavement, rather than the actual length of the wire in the slot. Drilling handholes, sawing the pavement, furnishing and installing CNC to the appropriate handhole, cable splicing to provide a fully operable detector loop, testing and all trench and backfill shall be included in this item.

Basis of Payment.
Detector Loop Replacement shall be paid for at the Contract unit price per foot (meter) of DETECTOR LOOP REPLACEMENT.

MAGNETIC DETECTOR REMOVAL AND DETECTOR LOOP INSTALLATION.
This work shall consist of the removal of existing magnetic detectors, magnetic detector lead-in cable and magnetic detection amplifiers and related control equipment wiring, installation of detector lead-in cable, detector loops, detector amplifiers and related equipment wiring. The detector loop, cable, and amplifier shall be installed according to the applicable portions of the Standard Specifications and the applicable portions of the Special Provision for "Detector Loop Replacement." All drilling of handholes, furnishing and installing CNC, cable splicing, trench and backfill, removal of equipment, and removing cable from conduit shall be included in this item.

Basis of Payment.
Magnetic Detector Removal and Detector Loop Installation shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I, per each for INDUCTIVE LOOP DETECTOR, and foot (meter) for ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR.

SIGN SHOP DRAWING SUBMITTAL
Effective: January 22, 2013
Revised: July 1, 2015
720.02TS

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

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

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)
6 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.

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.

PROTECTION OF EXISTING TREES

The Contractor shall be responsible for taking measures to minimize damage to the tree limbs, tree trunks, and tree roots at each work site. All such measures shall be included in the contract price for other work except that payment will be made for TEMPORARY FENCE, TREE TRUNK PROTECTION, TREE ROOT PRUNING, and TREE PRUNING.

The Contractor shall coordinate with the village forester or arborist prior to the start of construction to do a walk through and determine which trees or shrubs are to be protected, method of protection, and determine type of work to minimize damage to the tree.

All work, materials and equipment shall conform to Section 201 and 1081 of the Standard Specifications except as modified herein.

A. Earth Saw Cut of Tree Roots (Root Pruning):
   1. Whenever proposed excavation falls within a drip-line of a tree, the Contractor shall:
      a. Root prune 6-inches behind and parallel to the proposed edge of trench a neat, clean vertical cut to a minimum depth directed by the Engineer through all affected tree roots.
      b. Root prune to a maximum width of 4-inches using a reciprocating saw blade for cutting tree roots or similar cutting machine. Trenching machines will not be permitted.
      c. Exercise care not to cut any existing utilities.
      d. If during construction it becomes necessary to expose tree roots which have not been precut, the Engineer shall be notified and the Contractor shall provide a clean, vertical cut at the proper root location, nearer the tree trunk, as necessary, by means of hand-digging and trimming with chain saw or hand saw. Ripping, shredding, shearing, chopping, or tearing will not be permitted.
      e. Top Pruning: When thirty percent (30%) or more of the root zone is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.

2. Whenever curb and gutter is removed for replacement, or excavation for removal of or construction of a structure is within the drip line/root zone of a tree, the Contractor shall:
    a. Root prune 6-inches behind the curbing so as to neatly cut the tree roots.
    b. Depth of cut shall be 12 inches for curb removal and replacement and 24 inches for structural work. Any roots encountered at a greater depth shall be neatly saw cut at no additional cost.
    c. Locations where earth saw cutting of tree roots is required will be marked in the field by the Engineer.
3. All root pruning work is to be performed through the services of a licensed arborist to be approved by the Engineer.

Root pruning will be paid for at the contract unit price each for TREE ROOT PRUNING, which price shall be payment for all labor, materials, and equipment.

Tree limb pruning will be paid for at the contract unit price per each for TREE PRUNING (1 TO 10 INCH DIAMETER) and/or TREE PRUNING (OVER 10 INCH DIAMETER), which price shall include labor, materials, and equipment.

B. Temporary Fence:
    1. The Contractor shall erect a temporary fence around all trees within the construction area to establish a “tree protection zone” before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored, or vehicles driven or parked within the “tree protection zone”.
    2. The exact location and establishment of the “tree protection zone” fence shall be approved by the Engineer prior to setting the fence.
    3. The fence shall be erected on three sides of the tree at the drip-line of the tree or as determined by the Engineer.
    4. All work within the “tree protection zone” shall have the Engineer’s prior approval. All slopes and other areas not regarded should be avoided so that unnecessary damage is not done to the existing turf, tree root system ground cover.
    5. The grade within the “tree protection zone” shall not be changed unless approved by the Engineer prior to making said changes or performing the work.

The fence shall be similar to wood lath snow fence (48 inches high), plastic poly-type or and other type of highly visible barrier approved by the Engineer. This fence shall be properly maintained and shall remain up until final restoration unless the Engineer directs removal otherwise. Tree fence shall be supported using T-Post style fence posts. **Utilizing re-bar as a fence post will not be permitted.**

Temporary fence will be paid for at the contract unit price per foot for TEMPORARY FENCE, which price shall include furnishing, installing, maintaining, and removing.

C. Tree Trunk Protection:

1. The Contractor shall erect trunk protection around all trees within the construction area to prevent damage to the trunk of the tree when temporary fence is not an option before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored, or vehicles driven or parked within the "tree protection zone".
2. The 2 inch x 8 inch x 8 foot boards shall be banded continuously around the trunk of each tree to prevent scarring of the trees shown on the plans or designated by the Engineer.
3. Multi-stem trees, saplings, and shrubs to be protected within the area of construction, temporary fence may be used for trunk protection.

Tree trunk protection will be paid for at the contract unit price per each for TREE TRUNK PROTECTION), which price shall include materials, installation, and removal.

D. Tree Limb Pruning:

1. The Contractor shall inspect the work site in advance and arrange with the village forester or arborist to have any tree limbs pruned that might be damaged by equipment operations at least one week prior to the start of construction. Any tree limbs that are broken by construction equipment after the initial pruning must be pruned correctly within 72 hours.
2. Top Pruning: When thirty percent (30%) or more of the root zone of a tree is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.

Tree limb pruning will be paid for at the contract unit price per each for TREE PRUNING (1 TO 10 INCH DIAMETER) and/or TREE PRUNING (OVER 10 INCH DIAMETER), which price shall include labor, materials, and equipment.

E. Removal of Driveway Pavement and Sidewalk:

1. In order to minimize the potential damage to the tree root system(s), the Contractor will not be allowed to operate any construction equipment or machinery within the "tree protection zone" located between the curb or edge of pavement and the right-of-way property line.
2. Sidewalk to be removed in the areas adjacent to the "tree protection zones" shall be removed with equipment operated from the street pavement. Removal shall be done by excavation equipment, or by hand, or a combination of these methods.

The method of removal shall be approved by the Engineer prior to commencing any work.

3. Any pavement or pavement related work that is removed shall be immediately disposed of from the area and shall not be stockpiled or stored within the parkway area under any circumstances.

F. Backfilling:

1. Prior to placing the topsoil and/or sod, in areas outside the protection zone, the existing ground shall be disked to a depth no greater than one (1"), unless otherwise directed by the Engineer. No grading will be allowed within the drip-line of any tree unless directed by the Engineer.

G. Damages:

1. In the event that a tree not scheduled for removal is injured such that potential irreparable damage may ensure, as determined by the Roadside Development Unit, the Contractor shall be required to remove the damage tree and replace it on a three to one (3:1) basis, at his own expense. The Roadside Development Unit will select replacement trees from the pay items already established in the contract.
2. The Contractor shall place extreme importance upon the protection and care of trees and shrubs which are to remain during all times of this improvement. It is of paramount importance that the trees and shrubs which are to remain are adequately protected by the Contractor and made safe from harm and potential damage from the operations and construction of this improvement. If the Contractor is found to be in violation of storage or operations within the "tree protection zone" or construction activities not approved by the Engineer, a penalty shall be levied against the Contractor with the monies being deducted from the contract. The amount of the penalty shall be two hundred fifty dollars ($250.00) per occurrence per day.

MULCH PLACEMENT FOR EXISTING WOODY PLANTS

This work shall be done in accordance with the applicable portion of Section 253.02 (c) and Section 1081.06 of the Standard Specifications for Road and Bridge Construction.

Description: This work shall consist of furnishing, transporting, and spreading an approved shredded hardwood bark mulch to the depth specified in areas as shown in the plans or as directed by the Engineer.

Material: Hardwood bark mulch shall be clean, finely shredded mixed-hardwood bark meeting the following requirements:

- Material shall be free of sticks, leaves, stones, dirt clods, and other debris.
- Individual wood chips shall not exceed 2 inches (50 mm) in the largest dimension.

The Contractor must submit a sample (1 – Gallon Size Bag) 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.

Method: The grade, depth, and condition of the area must be approved by the Engineer prior to placement.

The Contractor shall spade a planting bed edge at approximately a 45-degree angle and to a depth of approximately 3-inches around the perimeter of the tree mulch ring, remove all weeds, litter, and plant debris prior to placement of the mulch. Remove any debris created in the spade edging process and dispose of as specified in Article 202.03. The Contractor shall repair the grade by raking and adding topsoil as needed before mulching.

Mulch shall be applied at a depth of 4-inches around all plants within the entire mulched bed area or around each individual tree to form a mulch ring. An excess of 4-inches of mulch is unacceptable and excess shall be removed. Mulch shall 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.

The diameter of the mulch rings shall be as follows:

- Trees with a diameter less than 10 inches shall have a minimum 5 – foot diameter mulch ring.
- Trees with a diameter between 10 -15 inches shall have a minimum 6 - foot diameter mulch ring.
- Trees with a diameter of 16 inches or greater shall have a minimum 8 – foot diameter mulch ring.

The shredded mulch shall be placed according at the required depth as specified in the plans for planting trees, shrubs, vines, and perennial plants. Care shall be taken not to bury leaves, stems, or vines under mulch material. Mulch shall not be in contact with the base of the trunk. Mulch volcanos are unacceptable.

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.

Method of Measurement: Mulch placement will be measured in place to the depth specified in

square yards. Areas not meeting the depth specified shall not be measured for payment.

If the inspection discloses any work as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with such instructions and correct the unsatisfactory work. Areas not meeting the satisfaction of the Engineer shall not be measured for payment. Plan quantities are estimates only. Actual quantities will be measured in place. Agreement to plan quantities will not be allowed.

Basis of Payment: This work will be paid for at the contract unit price per square yard for MULCH PLACEMENT, of the thickness specified. Payment shall include all costs for turf removal and disposal, trimming, materials, equipment, and labor required to complete the work specified herein, including the cost of removing and disposing of any debris to the satisfaction of the Engineer. Any mulch placement included as part of the work in other work items will not be measured separately for payment.

AVAILABLE REPORTS

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: Uncontaminated Soil Certification Report

Those seeking these reports should request access from:

Daniel O'Malley
domalley@ehancock.com
Hancock Engineering Co.
9933 Roosevelt Road
Westchester, Il 60154
708-865-0300
Monday-Friday, 8:00AM - 4:00PM

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 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 journey worker 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 Brookfield: 8820 Brookfield Avenue, Brookfield, Illinois 60153

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."

WMO Permit Number:_____

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/wpass. 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): Prairie Avenue Improvements

Location of Project (address or with respect to two major streets): Prairie Avenue (Brookfield Avenue - 31st Street)

Municipality (Township, if unincorporated): Village of Brookfield

PIN (include all impacted, use additional sheet if necessary): ____-____-____-____-_____ , ____-____-____-____-_____

____-____-____-____-_____ , ____-____-____-____-_____

SEWER AREA OF PROJECT

☒ Combined Sewer Area ☐ Separate Sewer Area

Storm sewer in a combined 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: _____ Permit Issued: _____

PERMIT ISSUED BY: ☐ DISTRICT ☐ Authorized Municipality

WMO PERMIT
GENERAL CONDITIONS

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

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

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. _____

1. **NAME OF PROJECT** Prairie Avenue Improvements
(as shown on the plans)

2. **APPURTENANCES** (check all applicable items)

☐ Siphon ☐ Drop Manholes ☐ Public Lift Station (Submit Sch. E) ☐ Outfalls (Submit Sch. O)

☐ Stream Crossing ☐ Direct Connections to District → Describe N/A

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 Brookfield

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 Brookfield

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

			Impervious area within project	
A. Total contiguous ownership interest	N/A -ROW	acres	C. Before development	N/A -ROW acres
B. Development Area	N/A -ROW	acres	D. After development	N/A ROW 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

WMO SCHEDULE B
SEWER SUMMARY

Watershed Management Permit No. _____

PROJECT NAME: Prairie Avenue Improvements
(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.)	see	attached	sheet				
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 617.9, 616.5 ft.

Sanitary Manholes in floodplain Yes (all plan sheets with areas inside of the flood plain have a note regarding bolt down lids)

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 IDOT roadway/streetscape project with several drainage structure improvements, storm lateral installation, and sewer point repairs

- ■ 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. _____

(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 _____

N/A

☐ 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 _____

N/A

☐ 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.

ENGINEERING CERTIFICATIONS

Watershed Management Permit No. _____

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: Edwin Hancock Engineering **Telephone:** (708) 865 - 0300

Address: 9933 W Roosevelt Road **City:** Westchester **Zip:** 60154

LICENSED PROFESSIONAL ENGINEER P.E. SEAL IVAN A. LOME 062.074537 ILLINOIS

Signature: _____ **Date:** 3/31/26

(Name and Title)

Email Address: ilome@ehancock.com

CERTIFICATE BY MUNICIPAL OR SYSTEM ENGINEER: The application and the drawings, together with other data 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 Brookfield

Municipal Engineer: Daniel O'Malley, P.E. **Telephone:** 630-864-7081

Address: 9933 W Roosevelt Road **City:** Westchester **Zip** 60154

LICENSED PROFESSIONAL ENGINEER DANIEL J. O'MALLEY 062-073491 SEAL OF ILLINOIS

Signature: _____ **Date:** 3/31/26

(Name and Title)

Email Address: domalley@ehancock.com

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: Edwin Hancock Engineering **Telephone:** 708-865-0300

Address: 9933 W Roosevelt Road **City:** Westchester **Zip** 60154

LICENSED PROFESSIONAL ENGINEER P.E. SEAL IVAN A. LOME 062.074537 OF ILLINOIS

Signature: _____ **Date:** 3/9/26

(Name and Title)

Email Address: ilome@ehancock.com

SPECIAL CONDITIONS

Watershed Management Permit No. _____

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: Ivan Lome, P.E.

Address : 9933 W Roosevelt Road, Westchester, Illinois 60154
Email : ilome@ehancock.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 **The project area is within municipal corporate limits.** ☒ Yes ☐ No ☐ Not Applicable	**CO-PERMITTEE** **(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: Village of Brookfield	Owner:
Address: 8820 Brookfield Avenue	Address:
City: Brookfield Zip: 60513	City: Zip:
Signature:	Signature:
Name: Lauren Moore (Print)	Name: (Print)
Title: Director of Public Works	Title:
Date: 3/26/2026 Phone: 708-308-9449	Date: Phone:
Email: lmoore@brookfield.gov	Email:

REVIEW AND APPROVAL BY THE DISTRICT OR AUTHORIZED MUNICIPALITY

Reviewed by: _____ **Date** _____
(Local Sewer Systems) or (Professional Engineer)

Approved for Issue

Approved by: _____ **Date** _____
(For the Director of Engineering) or (Enforcement Officer)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2520 West Iles Avenue; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: BROOKFIELD (IL0310330)

Permit Issued to:
Village of Brookfield
4545 Eberly Ave.
Brookfield, IL 60513

PERMIT NUMBER: 1136-FY2026

DATE ISSUED: April 20, 2026
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: Hancock Engineering Company
NUMBER OF PLAN SHEETS: 40
TITLE OF PLANS: "Prairie Avenue Improvements"
APPLICATION RECEIVED DATE: April 1, 2026

PROPOSED IMPROVEMENTS:

The installation of approximately 125 feet of 6-inch, 2900 feet of 8-inch, 25 feet of 16-inch water main, eight fire hydrants with an auxiliary valve, and nine water main control valves.

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.

2. 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.

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.

4. 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. A minimum of four sets of coliform samples must be taken. 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.

5. The permit approval is for the Application, Schedule B and 40 plan sheets received on April 1, 2026 and Schedule B received on April 20, 2026.

CLJ:JAR

cc: Hancock Engineering Company
Elgin Regional Office
Cook County Health Department
IDPH/DEH – Plumbing and Water Quality Program

Chris Johnston/JAR

Chris Johnston, P.E.
Manager Permit Section
Division of Public Water Supplies

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

The Illinois Environmental Protection Agency Act (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 or 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 statues 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 the Board for 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.
8. Division of Public Water Supply Construction Permits expire one year from date of issuance or renewal, unless construction has started. If construction commences within one year from date of issuance or renewal, the permit expires five years from the date of permit issuance or renewal. A request for extension shall be filed prior to the permit expiration date.

Illinois Environmental Protection Agency

2520 West Iles Avenue • 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: Prairie Avenue Reconstruction Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

Prairie Avenue: 31st Street to Brookfield Avenue - See Attached Figures

City: Brookfield State: IL Zip Code: 60513

County: Cook Township: Brookfield

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.8287 Longitude: - 87.84421

(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): _____ Approximate End Date (mm/dd/yyyy): _____

Estimated Volume of debris (cu. Yd.): _____

II. Owner/Operator Information for Source Site

Site Owner

Name: Village of Brookfield

Street Address: 8820 Brookfield Avenue

PO Box: _____

City: Brookfield State: IL

Zip Code: 60513 Phone: (708) 485-7344

Contact: Lauren Moore

Email, if available: _____

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.

Project Name: Prairie Avenue Reconstruction Latitude: 41.82870 Longitude: - 87.84421

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 limited historical & regulatory review was performed to identify PIPs. Site reconnaissance was performed while sampling to evaluate on-site environmental conditions & potential PIPs. Based on the nature & scope of the project, 13 soil samples were collected for indicator contaminants associated with identified PIPs and screened with a PID. Figure 2 shows sample locations.

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]:

See attached analytical summary tables, laboratory reports and associated NELAC certification. Figures 2 identifies the project area that is covered by this certification.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Ryan M. LaDieu, P.E. (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:	True North Consultants
Street Address:	1000 E Warrenville Road, Suite 140
City:	Naperville State: IL Zip Code: 60563
Phone:	630-717-2880

Ryan M. LaDieu
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

Mar 26, 2026
Date:



P.E or L.P.G. Seal:

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, tons = A x D x (G_{mb} x 46.8) / 2000. For HMA mixtures measured in square meters: Q, metric tons = A x D x (G_{mb} x 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, tons = V x 8.33 lb/gal x SG / 2000
For bituminous materials measured in liters: Q, metric tons = V x 1.0 kg/L x 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:

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.

80173

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 ($Na_2O + 0.658K_2O$) 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 ($Na_2O + 0.658K_2O$) 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 ($Na_2O + 0.658K_2O$) 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 ºF, 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 ºC, 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."

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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 **16**% 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. UTILZATION 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

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)
¾ (19)	0.44 (0.66)		
1 (25)	0.58 (0.86)		
1 ¼ (32)	0.66 (0.98)	0.44 (0.66)	
1 ½ (38)	0.74 (1.10)	0.48 (0.71)	0.63 (0.94)
1 ¾ (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)
≥ 2 ¼ (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) ± 15%
Apparent Opening Size	ASTM D 4751	No. 30 (600 µm) 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 ± 0.0050 in. (1.0 ± 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) ± 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 µm) 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."

80483

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

PAVEMENT PATCHING (BDE)

Effective: August 1, 2025

Revise the first sentence of the last paragraph of Article 442.06(a)(2) of the Standard Specifications to read:

"Type IV patches shall be reinforced with welded wire reinforcement according to the details shown on the plans."

Revise Article 442.06(a)(3) of the Standard Specifications to read:

"(3) Class C Patching. Patches adjacent to a new lane of pavement, new portland cement concrete shoulder, or new curb and gutter of more than 20 ft (6 m) in length shall be tied with No. 6 (No. 19) tie bars, 24 in. (600 mm) long, embedded 8 in. (200 mm) at 36 in. (900 mm) centers according to Article 420.05(b).

When the patched pavement is not to be resurfaced, transverse contraction joints shall be formed on 15 ft (4.5 m) to 20 ft (6 m) centers by sawing in all patches that are more than 20 ft (6 m) in length. They shall be placed in line with joints or cracks in the existing slab whenever possible."

Revise the eighth paragraph of Article 442.11 of the Standard Specifications to read:

"Pavement tie bars for patches will be paid for at the contract unit price per each for TIE BARS, of the diameter specified."

80468

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, ΔTc, 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, ΔTc, 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)	≥ 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, *.[0-9], *.IGM, *.ABS, *.DRT, *.SBM, *.RAS) shall be submitted to the Central Bureau of Materials.

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<tr><td>SBS-SM 70-22</td><td>≤ 2</td><td>≥ 30 %</td></tr>
<tr><td>SBS-SM 76-28</td><td rowspan="3">58 °C</td><td>≤ 0.5</td><td>≥ 80 %</td></tr>
<tr><td>SBS-SM 70-28</td><td>≤ 1</td><td>≥ 60 %</td></tr>
<tr><td>SBS-SM 64-28</td><td>≤ 2</td><td>≥ 30 %</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td colspan="3">Small Strain Parameter (AASHTO PP 113) BBR, ΔTc,
40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)</td><td>-5 °C min.</td></tr>
<tr><td colspan="3">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)</td><td>≥ 60 %</td></tr>
</table>

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

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: November 1, 2026

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 the first paragraph of Article 703.04 of the Standard Specifications to read:

"**703.04 Short Term Pavement Markings.** Before the lane is opened to traffic, short term pavement markings shall be installed between all lanes open to traffic. Center line or lane line markings shall consist of an abbreviated pattern of single stripes 4 ft (1.2 m) in length and 6 in. (150 mm) wide at a maximum spacing of 40 ft (12 m) between stripes. Center lines on two-lane highways shall be yellow and lane lines separating two or more lanes of traffic moving in the same direction shall be white. Edge line markings shall be applied on multilane divided highways and other highways with a paved shoulder greater than 4 ft (1.2 m) wide. Edge line markings shall consist of stripes 4 ft (1.2 m) in length and 6 in. (150 mm) wide at intervals of 50 ft (15 m) on ramps and 200 ft (60 m) on mainline installed at approximately a 45 degree diagonal pointing in the direction of traffic. Short term pavement markings on the final wearing surface shall be transversely offset from the permanent pavement marking location as directed by the Engineer. Short term pavement markings shall be removed within five calendar days after permanent pavement markings are installed."

Revise the first paragraph of Article 703.05 of the Standard Specifications to read:

"**703.05 Temporary Pavement Marking.** When an intermediate course cannot be overlaid or if the final surface cannot be permanently marked within the time restrictions listed above, the full standard markings shall be installed with temporary pavement markings. Temporary lane line, edge line, and center line markings shall be a minimum of 6 in. (150 mm) wide and of the

same color as shown on the plans for the permanent markings. Other temporary markings shall be of the same color and dimensions as shown on the plans for the permanent markings."

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 overlaminate 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

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."

80482

SURFACE TESTING OF PAVEMENTS – IRI (BDE)

Effective: January 1, 2021
Revised: January 1, 2023

Description. This work shall consist of testing the ride quality of the finished surface of pavement sections with new concrete pavement, PCC overlays, full-depth HMA, and HMA overlays with at least 2.25 in. (57 mm) total thickness of new HMA combined with either HMA binder or HMA surface removal, according to Illinois Test Procedure 701, "Ride Quality Testing Using the International Roughness Index (IRI)". Work shall be according to Sections 406, 407, or 420 of the Standard Specifications, except as modified herein.

Hot-Mix Asphalt (HMA) Overlays

Add the following to Article 406.03 of the Standard Specifications:

"(n) Pavement Surface Grinding Equipment.....1101.04"

Revise Article 406.11 of the Standard Specifications to read:

"**406.11 Surface Tests.** Prior to HMA overlay pavement improvements, the Engineer will measure the smoothness of the existing high-speed mainline pavement. The Contractor shall measure the smoothness of the finished high-speed mainline, low-speed mainline, and miscellaneous pavements after the pavement improvement is complete but within the same construction season. Testing shall be performed in the presence of the Engineer and according to Illinois Test Procedure 701. The pavement will be identified as high-speed mainline, low-speed mainline, or miscellaneous as follows.

(a) Test Sections.

(1) High-Speed Mainline Pavement. High-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit greater than 45 mph. These sections shall be tested with an inertial profiling system (IPS).

(2) Low-Speed Mainline Pavement. Low-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit of 45 mph or less. These sections shall be tested using a 16 ft (5 m) straightedge or with an IPS analyzed using the rolling 16 ft (5 m) straightedge simulation in ProVAL.

(3) Miscellaneous Pavement. Miscellaneous pavement are segments that either cannot readily be tested by an IPS or conditions beyond the control of the Contractor preclude the achievement of smoothness levels typically achievable with mainline pavement construction. This may include the following examples or as determined by the Engineer.

a. Pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1,000 ft (300 m) and the pavement within the superelevation transition of such curves;

b. Pavement on vertical curves having a length less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grade greater than or equal to 3 percent as may occur on urban ramps or other constricted-space facilities;

c. The first and last 50 ft (15 m) of a pavement section where the Contractor is not responsible for the adjoining surface;

d. Intersections and the 25 ft (7.6 m) before and after an intersection or end of radius return;

e. Variable width pavements;

f. Side street returns, to the end of radius return;

g. Crossovers;

h. Pavement connector for bridge approach slab;

i. Bridge approach slab;

j. Pavement that must be constructed in segments of 600 ft (180 m) or less;

k. Pavement within 25 ft (7.6 m) of manholes, utility structures, at-grade railroad crossings, or other appurtenances;

l. Turn lanes; and

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

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

(4) International Roughness Index (IRI). An index computed from a longitudinal profile measurement using a quarter-car simulation at a simulation speed of 50 mph (80 km/h).

(5) Mean Roughness Index (MRI). The average of the IRI values for the right and left wheel tracks.

a. MRI_O. The MRI of the existing pavement prior to construction.

b. MRI_I. The MRI value that warrants an incentive payment.

c. MRI_F. The MRI value that warrants full payment.

d. MRI_D. The MRI value that warrants a financial disincentive.

(6) Areas of Localized Roughness (ALR). Isolated areas of roughness, which can cause significant increase in the calculated MRI for a given sublot.

(7) Sublot. A continuous strip of pavement 0.1 mile (160 m) long and one lane wide. A partial sublot greater than or equal to 264 ft (80 m) will be subject to the same evaluation as a whole sublot. Partial sublots less than 264 ft (80 m) shall be included with the previous sublot for evaluation purposes.

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

(1) High-Speed Mainline Pavement. For high-speed mainline pavement, any 25 ft (7.6 m) interval with an ALR in excess of 200 in./mile (3,200 mm/km) will be identified by the Engineer and shall be corrected by the Contractor. Any sublot having a MRI greater than MRI_D, including ALR, shall be corrected to reduce the MRI to the MRI_F, or replaced at the Contractor's option.

(2) Low-Speed Mainline Pavement. Surface variations in low-speed mainline pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.

(3) Miscellaneous Pavements. Surface variations in miscellaneous pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.

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

Upon completion of the corrective work, the surface of the sublot(s) shall be retested. The Contractor shall furnish the data and reports to the Engineer within 2 working days after corrections are made. If the MRI and/or ALR still do not meet the requirements, additional corrective work shall be performed.

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

(c) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each sublot of high-speed mainline pavement per the Smoothness Assessment Schedule. Assessments will be based on the MRI of each sublot prior to performing any corrective work unless the Contractor has chosen to remove and replace the pavement.

For pavement that is replaced, assessments will be based on the MRI determined after replacement.

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

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

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

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

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, HMA Overlay)	
Mainline Pavement MRI Range	Assessment Per Sublot [1/]
$MRI \leq MRI_I$	$+ (MRI_I - MRI) \times \$20.00$ [2/]
$MRI_I < MRI \leq MRI_F$	+ \$0.00
$MRI_F < MRI \leq MRI_D$	$- (MRI - MRI_F) \times \$8.00$
$MRI > MRI_D$	– \$200.00

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

2/ The maximum incentive amount shall not exceed \$300.00.

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

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

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

"**407.03 Equipment.** Equipment shall be according to Article 406.03."

Revise Article 407.09 of the Standard Specifications to read:

"**407.09 Surface Tests.** The finished surface of the pavement shall be tested for smoothness

according to Article 406.11, except as follows:

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

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, Full-Depth HMA)	
Mainline Pavement MRI, in./mile (mm/km)	Assessment Per Sublot [1/]
≤ 45.0 (710)	+ (45 – MRI) × $45.00 [2/]
> 45.0 (710) to 75.0 (1,190)	+ $0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × $20.00
> 100.0 (1,580)	– $500.00

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

2/ The maximum incentive amount shall not exceed $800.00."

Portland Cement Concrete Pavement

Delete Article 420.03(i) of the Standard Specifications.

Revise Article 420.10 of the Standard Specifications to read:

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

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

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

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

Jointed portland cement concrete pavement corrected by removal and replacement, shall be corrected in full panel sizes.

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

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, PCC)	
Mainline Pavement MRI, in./mile (mm/km) [3/]	Assessment Per Sublot [1/]
≤ 45.0 (710)	+ (45 – MRI) × $60.00 [2/]
> 45.0 (710) to 75.0 (1,190)	+ $0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × $37.50
> 100.0 (1,580)	– $750.00

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

2/ The maximum incentive amount shall not exceed $1200.00.

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

Removal of Existing Pavement and Appurtenances

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

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

General Equipment

Revise Article 1101.04 of the Standard Specifications to read:

"**1101.04 Pavement Surface Grinding Equipment.** The pavement surface grinding device shall have a minimum effective head width of 3 ft (0.9 m).

(a) Diamond Saw Blade Machine. The machine shall be self-propelled with multiple diamond saw blades.

(b) Profile Milling Machine. The profile milling machine shall be a drum device with carbide or diamond teeth with spacing of 0.315 in. (8 mm) or less and maintain proper forward speed for surface texture according to the manufacturer's specifications."

80435

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

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, 2026

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; green, 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

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 reprocurement 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/WHD/legacy/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 reprocurement 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.

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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 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).

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.