135

Letting March 9, 2018

Notice to Bidders, Specifications and Proposal

Illinois Department of Transportation

Springfield, Illinois 62764

Contract No. 61E35
DUPAGE County
Section 16-00081-00-PV (Glen Ellyn)
Routes FAU 2580 & FAU 2581 (Park Blvd. & Main St.)
Project 9V1A-115 ()
District 1 Construction Funds

Prepared by

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Checked by

(Printed by authority of the State of Illinois)

Illinois Department of Transportation

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 10:00 a.m. March 9, 2018 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. 61E35
   DUPAGE County
   Section 16-00081-00-PV (Glen Ellyn)
   Project 9V1A-115 ()
   Routes FAU 2580 & FAU 2581 (Park Blvd. & Main St.)
   District 1 Construction Funds

Resurfacing and reconstruction on Park Boulevard from IL Route 38 to Crescent Boulevard, and on Main Street from IL Route 38 to Fairview Avenue in the Village of Glen Ellyn.

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

   (b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.

4. **AWARD CRITERIA AND REJECTION OF BIDS**. This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Randall S. Blankenhorn,
Secretary

CONTRACT 61E35

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2018

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

ERRATA Standard Specifications for Road and Bridge Construction
(Adopted 4-1-16) (Revised 1-1-18)

SUPPLEMENTAL SPECIFICATIONS

CHECK SHEET
FOR
RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

RECURRING SPECIAL PROVISIONS

CHECK SHEET
FOR
LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

The following LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

INDEX OF SPECIAL PROVISIONS

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, 2014
	80382	144	X	Adjusting Frames and Grates	April 1, 2017	
	80274			Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
	80192			Automated Flagger Assistance Device	Jan. 1, 2008	
	80173	146	X	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
	80241			Bridge Demolition Debris	July 1, 2009	
	5026I			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5048I			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5049I			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
	5053I			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
	80366	148	X	Butt Joints	July 1, 2016	
	80386			Calcium Aluminate Cement for Class PP-5 Concrete Patching	Nov. 1, 2017	
*	80396			Class A and B Patching	Jan. 1, 2018	
	80384	149	X	Compensable Delay Costs	June 2, 2017	
	80198			Completion Date (via calendar days)	April 1, 2008	
	80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
	80293			Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
	80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
	80277			Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
	80261	153	X	Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
	80387			Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
	80029	156	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	July 2, 2016
*	80378	167	X	Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
	80388	174	X	Equipment Parking and Storage	Nov. 1, 2017	
	80229	175	X	Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
	80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2017
	80246	178	X	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2016
*	80347			Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits - Jobsite Sampling	Nov. 1, 2014	Jan. 1, 2018
	80383			Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	Nov. 1, 2017
	80376	179	X	Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
*	80392	180	X	Lights on Barricades	Jan. 1, 2018	
	80336			Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
*	80393	182	X	Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	
	80045			Material Transfer Device	June 15, 1999	Aug. 1, 2014
*	80394			Metal Flared End Section for Pipe Culverts	Jan. 1, 2018	
	80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
	80349			Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
	80371	184	X	Pavement Marking Removal	July 1, 2016	
*	80390	185	X	Payments to Subcontractors	Nov. 2, 2017	
	80377	186	X	Portable Changeable Message Signs	Nov. 1, 2016	April 1, 2017
	80389	187	X	Portland Cement Concrete	Nov. 1, 2017	
	80359			Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2017
	80385	188	X	Portland Cement Concrete Sidewalk	Aug. 1, 2017	
	80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
	80328	189	X	Progress Payments	Nov. 2, 2013	
	3426I			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
	80157	190	X	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	

	File Name	Pg.		Special Provision Title	Effective	Revised
*	80306			Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Jan. 1, 2018
*	80395			Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
	80340			Speed Display Trailer	April 2, 2014	Jan. 1, 2017
	80127			Steel Cost Adjustment	April 2, 2014	Aug. 1, 2017
*	80391	191	X	Subcontractor Mobilization Payments	Nov. 2, 2017	
	80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016
	80298	193	X	Temporary Pavement Marking (NOTE: This special provision was previously named *"Pavement Marking Tape Type IV"*.)	April 1, 2012	April 1, 2017
	20338	196	X	Training Special Provision	Oct. 15, 1975	
*	80318			Traversable Pipe Grate for Concrete End Sections (Note: This special provision was previously named "*Traversable Pipe Grate*".)	Jan. 1, 2013	Jan. 1, 2018
	80288	198	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
	80302	201	X	Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
	80071			Working Days	Jan. 1, 2002	

The following special provisions are in the 2018 Supplemental Specifications and Recurring Special Provisions.

File Name	Special Provision Title	New Location	Effective	Revised
80368	Light Tower	Article 1069.08	July 1, 2016	
80369	Mast Arm Assembly and Pole	Article 1077.03(a)(1)	July 1, 2016	
80338	Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	Recurring CS #35	April 1, 2014	April 1, 2016
80379	Steel Plate Beam Guardrail	Articles 630.02, 630.05, 630.06, and 630.08	Jan. 1, 2017	
80381	Traffic Barrier Terminal, Type 1 Special	Article 631.04	Jan. 1, 2017	
80380	Tubular Markers	Articles 701.03, 701.15, 701.18, and 1106.02	Jan. 1, 2017	

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction" and the Supplemental Specifications and Recurring Special Provisions," adopted January 1, 2018, the latest editions of the "Manual on Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test procedures of Materials" in effect on the date of the invitation of bids and the Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of Park Boulevard, Section 16-00081-00-PV, Project Number 9V1A(115), Job Number C-91-215-16 and the resurfacing of Main Street, and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

CONTRACT NO. 61E35

LOCATION OF THE PROJECT

The project is located on Main Street between Roosevelt Road (IL Route 38) and Fairview Avenue and on Park Boulevard between Roosevelt Road and Crescent Boulevard in the Village of Glen Ellyn, DuPage County, Illinois. The project is located in the South ½ Section of Section 11, SW ¼ Section and East ½ Section of Section 14, Township 39N, Range 10N, 3rd PM. The gross and net length is 6,375 feet (1.207 miles) for Park Boulevard, 1,802 feet (0.341 miles) for Main Street, and 8,177 feet (1.549 miles) for the entire project.

DESCRIPTION OF PROJECT

The work consists of pavement rehabilitation (resurfacing) & reconstruction, earth excavation, placement of aggregate subgrade, combination concrete curb and gutter, HMA pavement, PCC sidewalk, storm sewer, sanitary sewer repairs, water main installation, pavement markings, traffic staging, temporary detour, restoration, and all other appurtenant work required to complete the project in accordance with the plans, specifications and all other applicable standards.

HOURS OF WORK

Working hours designated for this project are as follows:

Monday through Friday	7:00 a.m. to 7:00 p.m.

Saturday (with Village permission)	7:00 a.m. to 4:00 p.m.
Sundays and Holidays	No work allowed

NOTIFICATION TO RESIDENTS

The Contractor shall notify all residences where assistance is needed in the verification of the location of the sanitary sewer service, a minimum of 24 hours and a maximum of 72 hours before the disruption or the assistance is needed. The Contractor shall also provide timely notice (a minimum of 48 hours but not more than 72 hours in advance) of any restrictions to driveway access during all phases of the project.

ACCESS TO ABUTTING PROPERTIES

Every possible effort shall be made to minimize those times when the residents, businesses, and customers on these streets will not have access to their property. The following criteria shall govern:

A. Contractor shall furnish and erect all required traffic control devices before starting construction on each street and repair section.
B. Sewer trenches in streets, driveways, approaches, and sidewalks shall receive select granular trench backfill within two hours of excavation or at the end of the work day, whichever comes first. Driveway approaches shall be temporarily restored as soon as any new curb and gutter can take traffic by placing temporary aggregate in the void spaces in front of and behind the curb and gutter as directed by the Engineer. No driveways shall be closed overnight without prior agreement of Engineer.
C. Curb and gutter shall be completed and driveways restored at least temporarily on one side of a street before curb and gutter work begins on the opposite side of the street. On streets where complete curb and gutter and driveway approach replacement will be performed, both the curb and gutter and driveway approaches must be completed and adequately cured to permit use prior to beginning similar work on the opposite side of the street.
D. Curb and gutter construction across driveways and driveway approach construction shall be done in halves where appropriate and as directed by the Engineer.

Residents will be allowed to park on one side of the street at night when they cannot use their driveways.

SITE CLEANLINESS/SPOIL DISPOSAL

The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. In order to minimize the potential damage to parkways, adjoining private property and tree root systems, the Contractor shall remove debris which is in the project area. Debris shall not be stockpiled or stored within the parkway or on street pavement under any circumstances.

All material removed in the course of the work shall be removed and disposed of off the site at location or locations provided by the Contractor at the end of each work day. Disposal of all spoil materials, either vegetative or soils, shall be considered included in the contract unit prices for the several removal items. The Village will not provide any site(s) for any spoil materials on a temporary or permanent basis.

EQUIPMENT CLEANING

No equipment cleaning will be allowed on any street, parkway or in any sewer.

STORAGE OF CONSTRUCTION MATERIALS

No construction materials shall be stored at a work site for longer than one week without permission of the Engineer. The risk of loss of stored materials shall remain with the Contractor. No stockpiling of construction materials will be allowed on parkways, without permission of the Engineer. Restoration of sites damaged due to storage shall be the responsibility of the Contractor.

PROTECTION

It shall be the responsibility of the Contractor to fully protect the work from physical damage (structural or cosmetic). Barricades, covers, watchmen, etc., shall be provided as necessary to adequately protect the work and the public. This item includes, but is not limited to, concrete sidewalk, driveway aprons, concrete pavement and landscaping.

PROTECTION OF EXISTING PAVEMENT

The Contractor shall not drive equipment other than rubber tired vehicles across any pavement, curb and gutter, driveways, or sidewalk unless suitable protection is provided in the form of planks or mats, and unless said pavement, curb and gutter, driveways or sidewalk is scheduled to be removed. All surface damaged during construction shall be removed and replaced as directed by the Engineer at the Contractor's expense.

USE OF VILLAGE STREETS

Contractor's truck traffic is restricted to certain streets to be coordinated with the Village.

DAMAGE TO PROPERTY

The Contractor shall be responsible for all damage to properties caused by the acts of his/her work in the course of performance of this contract and shall replace or restore to its original condition all damaged property at no cost to the Department.

SOLICITATION

The Contractor shall not be allowed to solicit additional work from adjoining homeowners while working on the construction project.

USE OF VILLAGE WATER

The Contractor shall be allowed the use of the Village of Glen Ellyn's water supply without cost for all water, whether used for tree watering, sod watering, or any other project water needs. The Village will furnish a water meter for use on site and the Engineer will specify which hydrant(s) can be used.

The Contractor shall provide all necessary labor, tools and equipment including water wagon truck, as needed, to perform the necessary work.

VILLAGE WATER SYSTEM OPERATIONS

With the exception of fire hydrants specified for use for acquiring water for the project, only Village Water Division personnel shall operate any hydrant, valve, water service shutoff valve or any other appurtenance of the existing water system.

COORDINATION WITH PUBLIC WORKS DEPARTMENT

The Contractor shall coordinate with the Professional Engineer and other representatives, all of the Public Works Department of the Village of Glen Ellyn, to minimize inconvenience to the public.

STATUS OF UTILITIES (D-1)

Effective: June 1, 2016

Utility companies and/or municipal owners located within the construction limits of this project have provided the following information in regard to 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.

UTILTIES TO BE ADJUSTED

Conflicts noted below have been identified by following the suggested staging plan included in the contract. The company has been notified of all conflicts and will be required to obtain the necessary permits to complete their work; in some instances resolution will be a function of the construction staging. The responsible agency must relocate or complete new installations as noted in the action column; 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.

LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
Throughout Park Boulevard and Main Street	Sanitary Manholes	Existing Sanitary Manholes are in conflict with the proposed roadway elevation. Manholes will be adjusted to be flush with the proposed roadway elevation.	Contractor	Perform Adjustment
Throughout Park Boulevard and Main Street	Storm Manholes, Inlets and Catch Basins	Existing Storm Manholes, Inlets and Catch Basins are in conflict with the proposed roadway elevation and sidewalk elevation. Structures will be adjusted to be flush with the proposed elevation.	Contractor	Perform Adjustment
Throughout Park Boulevard and Main Street	Water Valve Vaults and Valve Boxes	Valve Vaults and Valve Boxes are in conflict with the proposed roadway elevation. Vaults and Boxes will be adjusted to be flush with the proposed roadway elevation.	Contractor	Perform Adjustment

STA 95+75 O/S 21' LT	4" Gas Main	Proposed 12" Storm Sewer is in conflict with the existing gas main.	Nicor	Relocate Gas Main
Park Boulevard STA 95+73 O/S 23' LT	2" Gas Main	Proposed 12" Storm Sewer is in conflict with the existing gas main.	Nicor	Relocate Gas Main
Park Boulevard STA 93+59 O/S 23' LT	4" Gas Main	Proposed 12" Storm Sewer is in conflict with the existing gas main.	Nicor	Relocate Gas Main
Park Boulevard STA 95+20 to 95+67 O/S 21' LT	4" Gas Main	Proposed Undercut over the existing gas main will not allow for 18" of cover during construction.	Nicor	Relocate Gas Main
Park Boulevard STA 99+16 to 99+56 O/S 21' LT	4" Gas Main	Proposed Undercut over the existing gas main will not allow for 18" of cover during construction.	Nicor	Relocate Gas Main
Park Boulevard STA 101+26 to 101+31 O/S 16' LT to 16' RT	2" Gas Main	Proposed Undercut over the existing gas main will not allow for 18" of cover during construction.	Nicor	Relocate Gas Main
Park Boulevard STA 109+12 to 109+39 O/S 16' LT to 14' RT	4" Gas Main	Proposed Undercut over the existing gas main will not allow for 18" of cover during construction.	Nicor	Relocate Gas Main
Park Boulevard STA 109+56 to 109+89 O/S 28' RT	4" Gas Main	Proposed Undercut over the existing gas main will not allow for 18" of cover during construction.	Nicor	Relocate Gas Main
Park Boulevard STA 110+25 to 110+27 O/S 18' RT to 14' RT	2" Gas Main	Proposed Undercut over the existing gas main will not allow for 18" of cover during construction.	Nicor	Relocate Gas Main

Park Boulevard STA 92+35 to 92+41 O/S 26' RT to 29' RT	Utility pole and Repeater	Proposed sidewalk is in conflict with the existing utility pole and repeater.	ComEd	Strip and Remove Pole, Relocate Repeater
Park Boulevard STA 93+22 O/S 26' RT	Utility pole	Proposed sidewalk is in conflict with the existing utility pole	ComEd & AT&T	ComEd to strip pole and AT&T to strip pole and remove the pole.
Park Boulevard STA 93+40 O/S 40' LT	Utility pole Guy Wire	Proposed Alley apron reconstruction is in conflict with the existing guy wire of the utility pole.	ComEd	Pole is not in conflict but will be replaced by ComEd Guy wire will be relocated slightly to the north
Park Boulevard STA 94+63 O/S 27' RT	Utility pole guy wire and anchor	Proposed sidewalk is in conflict with the existing guy wire of the utility pole.	ComEd	The guy wire and anchor will be removed and replaced
Park Boulevard Various Locations	Underground, at grade and overhead communication lines	Various conflicts.	AT&T	AT&T is developing plans to relocate facilities which are in conflict with the proposed improvements

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

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address

AT&T	Janet Ahern	1000 Commerce Drive, Oakbrook, IL 60523	630-573-6414	ja1763@att.com G05256@att.com
ComEd	Christina Florek	1N423 Swift Road, Lombard, IL 60148	630-424-5154	christina.florek@comed.com
Nicor	Pat Gerace		630-230-3099	pgerace@hbkengineering.com

UTILITIES TO BE WATCHED AND PROTECTED

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

No utilities 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	e-mail address
AT&T	Janet Ahern	1000 Commerce Drive, Oakbrook, IL 60523	630-573-6414	ja1763@att.com G05256@att.com
ComEd	Rick Seidel	One Lincoln Centre, Oakbrook Terrace, IL 60181	630-437-4855	
Crown Castle	Rebecca Caldwall	2000 Corporate Drive, Canonsburg, PA 15317	888-632-0931 x 2	fiberdigteam@crowncastle.com

Wide Open West	Paul Flinkow	1674 Frontenac Road, Naperville, IL 60563	630-536-3139	Paul.Flinkow@wowinc.com
Comcast	Martha Gieras	688 Industrial Drive, Elmhurst, IL 60126	630-600-6352	
Nicor	Bruce Koppang	1844 Ferry Road, Naperville, IL 60563	630-388-3046	BKoppan@southerco.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 taken into account 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 in the action column 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 dates 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. The Department's contractor is responsible for contacting J.U.L.I.E. prior to any and all excavation work.

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.

CONTRACTOR MAINTENANCE REQUIREMENTS

The Contractor shall be required to make arrangements for the proper bracing, shoring, and other required protection of all roadways, structures, poles, cables and pipe lines, before construction begins. The Contractor shall be responsible for any damage to the streets or roadways and associated structures and shall make repairs as necessary to the satisfaction of the Engineer and the Village at their own expense. Any sheeting and/or shoring used for this improvement shall be considered included in the cost of the associated roadway and structure items unless noted otherwise.

The Contractor shall protect all existing facilities (e.g. curb, driveways, pavement) that are not indicated to be removed on the plans. Any facility that is damaged during construction shall be restored to a condition equal to that existing before the damage occurred at the Contractor's expense.

The Contractor shall be responsible for protecting fresh concrete from damage and vandalism. Any damaged or vandalized concrete shall be removed and replaced at the Contractor's expense.

The Contractor shall dispose of and remove from the site each day all curb and gutter, pavement, and all other excavated material not for salvage. The cost for hauling and trucking to disposal locations shall be included in the cost of the item being removed.

When existing drainage facilities are disturbed, the Contractor shall provide and maintain in an operating condition temporary outlets and connections for all drains, sewers, and catch basins. The Contractor shall provide facilities which have the capacity to receive and discharge the storm water flow rates normally accepted and released by existing drainage facilities. This work will not be paid for separately, but shall be considered included in the cost of the work items in the contract.

All disturbed areas within the project that are not otherwise surfaced shall be cleaned, layered with topsoil, and seeded as shown in the plans. Limits shown on the plans are the maximum widths for payment purposes. Additional areas damaged by machinery, construction equipment, Contractor negligence, or over-excavation shall be restored to a condition equal to that existing before the damage occurred at the cost of the Contractor.

All property lot irons/corner monuments damaged or removed during construction of this project shall be replaced by the Engineer and said cost of replacement shall be paid by the Contractor.

All road signs, street signs, and traffic signs that need to be relocated or moved due to construction, shall be taken down and stored by the Contractor at his own expense, with

one exception. Those signs that are necessary for proper traffic control shall be temporarily reset until completion of construction operations. After completion of the work, the Contractor shall reset all said signs in accordance with Article 107.25.

UTILITIES

The location of existing drainage structures, storm sewers, water mains, sanitary sewers, field tiles, and any other public or private utilities as shown on the plans is approximate and not necessarily complete. Their exact location is to be determined in the field by the Contractor. The Contractor will be required to determine the exact location and depth of such utilities prior to reaching that point of work and exercise care during his construction operations so as to not damage them, in accordance with the special provisions and Article

The Contractor shall be responsible for the protection of all underground and surface utilities, even though they may not be shown on the plans. Any utility that is damaged during construction shall be restored to a condition equal to that existing before the damage incurred. This work shall be arranged by the Utility company and at the expense of the Contractor.

TRAFFIC CONTROL PLAN

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 and Engineer at least 72 hours in advance of beginning work.

STANDARDS:

- 701011-04 OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701101-05 OFF-RD OPERATIONS, MULTILANE, 15’ (4.5m) TO 24” (600 mm) FROM PAVEMENT EDGE
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-03 LANE CLOSURE, 2L, 2W MOVING OPERATIONS – DAY ONLY
- 701501-06 URBAN LANE CLOSURE, 2L, 2W UNDIVIDED

- 701801-06 SIDEWALK, CORNER, OR CROSSWALK CLOSURE
- 701901-07 TRAFFIC CONTROL DEVICES

DETAILS:
- District Standard TC-10, Traffic Control and Protection for Side Roads, Intersections, and Driveways
- District Standard TC-13, Typical Pavement Markings
- District Standard TC-16, Short Term Pavement Marking Letters and Symbols
- District Standard TC-22, Arterial Road Information Sign
- District Standard TC-26, Driveway Entrance Signing

SPECIAL PROVISIONS:
- Maintenance of Roadways (D-1)
- Public Convenience and Safety (D-1)
- Temporary Pavement Marking (BDE)
- Pavement Marking Removal (BDE)
- Temporary Information Signing (D-1)
- Portable Changeable Message Signs (BDE)

Traffic Control and Protection items as outlined above and detailed in the plans shall be paid for at the contract unit price Lump Sum for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

NOTIFICATION

The Contractor shall notify the Engineer a minimum of three (3) working days (72 hours) prior to starting any work on this contract, and a minimum of two (2) working days (48 hours) prior to starting each different type of work.

Roadway

The Contractor shall notify Pace's Transportation Engineer at (847) 228-3584 a minimum of 2 weeks in advance of beginning work.

The Contractor shall contact IDOT District One's Traffic Control Supervisor at (847) 705-4470 a minimum of seventy-two (72) hours in advance of beginning work.

Detector Loops

The Contractor shall contact, minimum of seven (7) working days prior to the detection removal, the Contractor shall notify the Traffic Signal Maintenance and Operations Engineer at (847)705-4424 and the IDOT Electrical Maintenance Contractor at (773) 287-7600.

Driveway Access

It is the responsibility of the Contractor to contact residents or businesses of removal and replacement activities that will inhibit or prohibit access to their driveway, in writing, a minimum of forty-eight (48) hours but not more than seventy-two (72) hours, prior to the commencement of these activities.

The morning of the work, the Contractor shall again notify the owner verbally, to allow the owner time to move their vehicle so as not to prohibit the vehicle from leaving the driveway upon removal of any material. The notice given out by the Contractor shall provide information regarding the anticipated date that full access will be restored. Coordination between activities should allow all work to be done in a timely manner so as to permit access to the roadway. Any additional cost of staging required to maintain access is considered included in the cost of TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

Sanitary

The Contractor shall make every effort to maintain sewer service usage throughout the duration of the project. In the event that a connection will be out of service, the longest period of no service shall be 8 hours. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. The Contractor shall also provide the following:

1. Written notice to be delivered to each home or business at least 48 hours prior to the beginning of work being conducted on the section, and a local telephone number of the Contractor they can call to discuss the project or any potential problems.
2. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

SEWER AND WATER MAIN WORK

All loose material deposited in the flow line of drainage structures that obstructs the natural flow of water shall be removed at the close of each working day, prior to acceptance of the improvement. All drainage structures shall be free of dirt and debris. This work will not be paid for separately, but shall be considered included in the unit cost for the associated sewer or water main work. Trench backfill shall be CA-06 exclusively. Recycled concrete is permitted so long as it is certified to meet IDOT Gradation Requirements.

Frame elevations given on the plans are only to assist the Contractor in determining the approximate overall height of the structure. Frames on all structures will be adjusted to the final elevation and cross slope of the area in which they are located.

All frames, grates, or lids scheduled to be removed from existing structures shall be disposed of by the Contractor. Any salvage items damaged during removal shall be replaced by the Contractor at their own expense.

COMPLETION DATE PLUS WORKING DAYS

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 _November 9, 2018_ except as specified herein.

Additionally there shall be two interim completion dates for this project. All improvements on Main Street shall be completed by June 8, 2018. Additionally, all work on Park Boulevard north of Hill Avenue (including the work at the Hill Avenue intersection) shall be completed by August 3, 2018. Restoration can be completed at a later date subject to approval by the Engineer.

The Contractor will be allowed to complete all clean-up work and punch list items within _10_ working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

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

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 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 ± 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."

HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013
Revised: January 1, 2018

1) Design Composition and Volumetric Requirements

Revise the table in Article 406.06(d) of the Standard Specifications to read:

"MINIMUM COMPACTED LIFT THICKNESS	
Mixture Composition	Thickness, in. (mm)
IL-4.75	3/4 (19)
SMA-9.5, IL-9.5, IL-9.5L	1 1/2 (38)
SMA-12.5	2 (50)
IL-19.0, IL-19.0L	2 1/4 (57)"

Revise the table in Article 1004.03(c) of the Standard Specifications to read:

"Use	Size/Application	Gradation No.
Class A-1, 2, & 3	3/8 in. (10 mm) Seal	CA 16
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & 3	Cover	CA 14
HMA High ESAL	IL-19.0 IL-9.5	CA 11 [1/] CA 16, CA 13[3/]
HMA Low ESAL	IL-19.0L IL-9.5L Stabilized Subbase or Shoulders	CA 11 [1/] CA 16
SMA[2/]	1/2 in. (12.5mm) Binder & Surface IL 9.5 Surface	CA13[3/], CA14 or CA16 CA16, CA 13[3/]

1/ CA 16 or CA 13 may be blended with the gradations listed.
2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.
3/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.

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

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

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 nomenclature table in Article 1030.01 of the Standard Specifications to read:

"High ESAL	IL-19.0 binder; IL-9.5 surface; IL-4.75; SMA-12.5, SMA-9.5
Low ESAL	IL-19.0L binder; IL-9.5L surface; Stabilized Subbase (HMA)[1/]; HMA Shoulders[2/]

1/ Uses 19.0L binder mix.

2/ Uses 19.0L for lower lifts and 9.5L for surface lift."

Revise Article 1030.02 of the Standard Specifications and Supplemental Specifications to read:

"**1030.02 Materials.** Materials shall be according to the following.

Item ..... Article/Section
(a) Coarse Aggregate 1004.03
(b) Fine Aggregate 1003.03
(c) RAP Material 1031
(d) Mineral Filler 1011
(e) Hydrated Lime 1012.01
(f) Slaked Quicklime (Note 1)
(g) Performance Graded Asphalt Binder (Note 2) 1032
(h) Fibers (Note 3)
(i) Warm Mix Asphalt (WMA) Technologies (Note 4)

Note 1. Slaked quicklime shall be according to ASTM C 5.

Note 2. 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 an Elvaloy or SBS PG 76-22 for IL-4.75, except where modified herein. The elastic recovery shall be a minimum of 80.

Note 3. 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 4. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, “Warm Mix Asphalt Technologies”.”

Revise Article 1030.04(a)(1) of the Standard Specifications and the Supplemental Specifications to read:

"(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) [1/]										
Sieve Size	IL-19.0 mm		SMA [4/] IL-12.5 mm		SMA [4/] IL-9.5 mm		IL-9.5 mm		IL-4.75 mm	
	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
3/8 in. (9.5 mm)				65	90	100	90	100		100
#4 (4.75 mm)	40	60	20	30	36	50	34	69	90	100
#8 (2.36 mm)	20	42	16	24 [5/]	16	32 [5/]	34 [6/]	52 [2/]	70	90
#16 (1.18 mm)	15	30					10	32	50	65
#30 (600 μm)			12	16	12	18				
#50 (300 μm)	6	15					4	15	15	30
#100 (150 μm)	4	9					3	10	10	18
#200 (75 μm)	3	6	7.0	9.0 [3/]	7.5	9.5 [3/]	4	6	7	9 [3/]
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		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/ The maximum percent passing the #635 (20 μm) sieve shall be ≤ 3 percent.

5/ 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.

6/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.

Revise Article 1030.04(b)(1) of the Standard Specifications to read:

"(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and 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.

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

1/ Maximum Draindown for IL-4.75 shall be 0.3 percent

2/ VFA for IL-4.75 shall be 72-85 percent"

Replace Article 1030.04(b)(3) of the Standard Specifications with the following:

"(3) SMA Mixtures.

Volumetric Requirements SMA 1/			
Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
80 4/	3.5	17.0 2/ 16.0 3/	75 - 83

1/ Maximum draindown shall be 0.3 percent. The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30 °F.

2/ Applies when specific gravity of coarse aggregate is ≥ 2.760.

3/ Applies when specific gravity of coarse aggregate is < 2.760.

4/ Blending of different types of aggregate will not be permitted. 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.

Add to the end of Article 1030.05 (d) (2) a. of the Standard Specifications:

"During production, the Contractor shall test SMA mixtures for draindown according to AASHTO T305 at a frequency of 1 per day of production."

Delete last sentence of the second paragraph of Article 1102.01(a) (4) b. 2.

Add to the end of Article 1102.01 (a) (4) b. 2.:

"As an option, collected dust (baghouse) may be used in lieu of manufactured mineral filler according to the following:

(a.)Sufficient collected dust (baghouse) is available for production of the SMA mix for the entire project.

(b.)A mix design was prepared based on collected dust (baghouse).

2) Design Verification and Production

Revise Article 1030.04 (d) of the Standard Specifications to read:

"(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department's verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification and shall meet the following requirements:

(1)Hamburg Wheel Test criteria. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in.

(12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the mix requirements table of the plans.

Illinois Modified AASHTO T 324 Requirements [1/]

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or less, loose Warm Mix Asphalt shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.
For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

(2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 60 psi (415 kPa) for non-polymer modified performance graded (PG) asphalt binder and 80 psi (550 kPa) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 200 psi (1380 kPa)."

Production Testing. Revise first paragraph of Article 1030.06(a) of the Standard Specifications to read:

"(a) High ESAL, IL-4.75, WMA, and SMA Mixtures. For each contract, a 300 ton (275 metric tons) test strip, except for SMA mixtures it will be 400 ton (363 metric ton), will be required at the beginning of HMA production for each mixture at the beginning of 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."

Add the following after the sixth paragraph in Article 1030.06 (a) of the Standard Specifications:

"The Hamburg Wheel test shall also be conducted on all HMA mixtures from a sample taken within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for the Department. The mix sample shall be

tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract.

If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria"

Method of Measurement:

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}."

Basis of Payment.

Replace the fourth paragraph of Article 406.14 of the Standard Specifications with the following:

"Stone matrix asphalt will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified; and POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified."

FRICTION AGGREGATE (D-1)

Effective: January 1, 2011
Revised: April 29, 2016

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/]

<table>
<tr><th>Use</th><th>Mixture</th><th colspan="2">Aggregates Allowed</th></tr>
<tr><td>HMA
High ESAL
Low ESAL</td><td>C Surface and Leveling Binder IL-9.5 or IL-9.5L

SMA
Ndesign 50
Surface</td><td colspan="2"><u>Allowed Alone or in Combination</u> [5/]:

Crushed Gravel
Carbonate Crushed Stone[2/]
Crystalline Crushed Stone
Crushed Sandstone
Crushed Slag (ACBF)
Crushed Steel Slag[4/]
Crushed Concrete[3/]</td></tr>
<tr><td rowspan="5">HMA
High ESAL</td><td rowspan="5">D Surface and Leveling Binder IL-9.5

SMA
Ndesign 50
Surface</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/]
Crushed Concrete[3/]</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/]:

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>
</table>

<table>
<tr><th>Use</th><th>Mixture</th><th colspan="2">Aggregates Allowed</th></tr>
<tr><td rowspan="2"></td><td rowspan="2"></td><td>75% Dolomite[2/]</td><td>Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone</td></tr>
<tr><td>75% Crushed Gravel[2/] or Crushed Concrete[3/]</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/], Crushed Concrete[3/], 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. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
3/ Crushed concrete will not be permitted in SMA mixes.
4/ Crushed steel slag shall not be used as leveling 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."

GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)

Effective: June 26, 2006
Revised: April 1, 2016

Add the following to the end of article 1032.05 of the Standard Specifications:

"(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other 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, *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

Add the following to the end of Note 1. 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 must be capable of providing continuous mechanical mixing throughout by continuous agitation and 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."

Revise 1030.02(c) of the Standard Specifications to read:

"(c) RAP Materials (Note 5) ……..1031"

Add the following note to 1030.02 of the Standard Specifications:

Note 5. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)

Effective: November 1, 2012
Revise: January 1, 2018

Revise Section 1031 of the Standard Specifications to read:

"**SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES**

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

(a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting from cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

(b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Central Bureau of Materials approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve. RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.

(1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.

(2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

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

(a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including

unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. “Non- Quality, FRAP -#4 or Type 2 RAS”, etc…).

(1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the FRAP will be used in.

(2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, HMA (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 in. (75 mm) single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.

(3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality, but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(4) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or HMA (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Non-Quality”.

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

(b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present.

However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of Type 1 RAS with Type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval. The Engineer's written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and accounted for in the mix design and during HMA production.

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

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

(a) FRAP Testing. When used in HMA, the FRAP shall be sampled and tested either during processing or after stockpiling. It shall also be sampled during HMA production.

(1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) Incoming Material. For testing as incoming material, washed extraction samples shall be run at a minimum frequency of one sample per 2000 tons (1800 metric tons) or once per week, whichever comes first.

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

Before extraction, each field sample of FRAP, shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to

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

(b) RAS Testing. RAS shall be sampled and tested during stockpiling according to Central Bureau of Materials Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources". The Contractor shall also sample as incoming material at the HMA plant.

(1) During Stockpiling. Washed extraction and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

(2) Incoming Material. For testing as incoming material at the HMA plant, washed extraction shall be run at the minimum frequency of one sample per 250 tons (227 metric tons). A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). The incoming material test results shall meet the tolerances specified herein.

The Contractor shall obtain and make available all test results from start of the initial stockpile sampled and tested at the shingle processing facility in accordance with the facility's QC Plan.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

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

(a) Evaluation of FRAP Test Results. All test results shall be compiled to include asphalt binder content, gradation and, when applicable (for slag), G_{mm}. A five test average of results from the original pile will be used in the mix designs. Individual extraction test results run thereafter, shall be compared to the average used for the mix design, and will be accepted if within the tolerances listed below.

Parameter	FRAP
No. 4 (4.75 mm)	± 6 %
No. 8 (2.36 mm)	± 5 %
No. 30 (600 μm)	± 5 %
No. 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.3 %
G_{mm}	± 0.03 1/

1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity".

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the FRAP stockpile shall not be used in Hot-Mix Asphalt unless the FRAP representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

The Contractor shall maintain a representative moving average of five tests to be used for Hot-Mix Asphalt production.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the ITP, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)" or Illinois Modified AASHTO T-164-11, Test Method A.

(b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. A five test average of results from the original pile will be used in the mix designs. Individual test results run thereafter, when compared to the average used for the mix design, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 μm)	± 4 %
No. 200 (75 μm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the RAS shall not be used in Hot-Mix Asphalt unless the RAS representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

(c) Quality Assurance by the Engineer. The Engineer may witness the sampling and splitting conduct assurance tests on split samples taken by the Contractor for quality control testing a minimum of once a month.

The overall testing frequency will be performed over the entire range of Contractor samples for asphalt binder content and gradation. The Engineer may select any or all split samples for assurance testing. The test results will be made available to the Contractor as soon as they become available.

The Engineer will notify the Contractor of observed deficiencies.

Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits.

Test Parameter	Acceptable Limits of Precision	
% Passing:[1/]	FRAP	RAS
1/2 in.	5.0%	
No. 4	5.0%	
No. 8	3.0%	4.0%
No. 30	2.0%	4.0%
No. 200	2.2%	4.0%
Asphalt Binder Content	0.3%	3.0%
G_{mm}	0.030	

1/ Based on washed extraction.

In the event comparisons are outside the above acceptable limits of precision, the Engineer will immediately investigate.

(d) Acceptance by the Engineer. Acceptable of the material will be based on the validation of the Contractor's quality control by the assurance process.

1031.05 Quality Designation of Aggregate in RAP and FRAP.

(a) RAP. The aggregate quality of the RAP for homogeneous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

(1) RAP from Class I, HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.

(2) RAP from HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.

(3) RAP from Class I, HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.

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

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

If the quality is not known, the quality shall be determined as follows. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant laboratory prequalified by the Department for the specified testing. The consultant laboratory shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 327. A maximum loss of 15.0 percent will be applied for all HMA applications. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of “B” quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

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

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

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

(2) Steel Slag Stockpiles. FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.

(3) Use in HMA Surface Mixtures (High and Low ESAL). FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.

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

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

(b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with FRAP in HMA mixtures up to a maximum of 5.0 percent by weight of the total mix.

When FRAP is used alone or FRAP is used in conjunction with RAS, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

Max Asphalt Binder Replacement for FRAP with RAS Combination

HMA Mixtures [1/ 2/ 4/]	Maximum % ABR		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified [3/]
30L	50	40	30
50	40	35	30
70	40	30	30
90	40	30	30
4.75 mm N-50			40
SMA N-80			30

1/ For Low ESAL HMA shoulder and stabilized subbase, the percent asphalt binder replacement shall not exceed 50 % of the total asphalt binder in the mixture.

2/ When the binder replacement exceeds 15 % for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall

each be reduced by one grade (i.e. 25 % binder replacement using a virgin asphalt binder grade of PG64-22 will be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 %, the required virgin asphalt binder grade shall be PG64-28.

3/ When the ABR for SMA or IL-4.75 is 15 % or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.

4/ When FRAP or RAS is used alone, the maximum percent asphalt binder replacement designated on the table shall be reduced by 10 %.

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

(a) FRAP and/or RAS. FRAP and /or RAS mix designs shall be submitted for verification. If additional FRAP or RAS stockpiles are tested and found to be within tolerance, as defined under "Evaluation of Tests" herein, and meet all requirements herein, the additional FRAP or RAS stockpiles may be used in the original design at the percent previously verified.

(b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design.

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

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

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

If during mix production, corrective actions fail to maintain FRAP, RAS or QC/QA test results within control tolerances or the requirements listed herein the Contractor shall cease production of the mixture containing FRAP or RAS and conduct an investigation that may require a new mix design.

(a) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for

all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

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

(1) Dryer Drum Plants.

a. Date, month, year, and time to the nearest minute for each print.

b. HMA mix number assigned by the Department.

c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

d. Accumulated dry weight of RAS and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.

f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.

g. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)

i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.

j. Accumulated mixture tonnage.

k. Dust Removed (accumulated to the nearest 0.1 ton (0.1 metric ton))

(2) Batch Plants.

a. Date, month, year, and time to the nearest minute for each print.

b. HMA mix number assigned by the Department.

c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).

d. Mineral filler weight to the nearest pound (kilogram).

f. RAS and FRAP weight to the nearest pound (kilogram).

g. Virgin asphalt binder weight to the nearest pound (kilogram).

h. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

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

1031.09 RAP in Aggregate Surface Course and Aggregate Wedge Shoulders, Type B. The use of RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

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

(b) Gradation. The RAP material shall meet the gradation requirements for CA 6 according to Article 1004.01(c), except the requirements for the minus No. 200 (75 µm) sieve shall not apply. The sample for the RAP material shall be air dried to constant weight prior to being tested for gradation.”

PUBLIC CONVENIENCE AND SAFETY (DIST 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."

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

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."

STORM SEWER ADJACENT TO OR CROSSING WATER MAIN

Effective: February 1, 1996
Revised: January 1, 2007

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

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois". Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

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

Basis of Payment: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be STORM SEWER of the class, type and diameter specified.

ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

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-1 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-1 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-1 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-1 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."

AGGREGATE SUBGRADE IMPROVEMENT (D-1)

Effective: February 22, 2012
Revised: April 1, 2016

Add the following Section to the Standard Specifications:

"**SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT**

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

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.04
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2 and 3)	1031

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

Note 2. RAP having 100 percent passing the 1 1/2 in (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradation CS 01 is used in lower lifts. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders. The final product shall not contain more than 40 percent by weight of RAP.

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

303.03 Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer. The calibration for the mechanical feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered.

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

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradation CS 01 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When Reclaimed Asphalt Pavement (RAP) is used, it shall be crushed and screened where 100 percent is passing the 1 1/2 in. (37.5 mm) sieve and being well graded. RAP that has been fractionated to size will not be permitted for use in capping. Capping aggregate will not be required when the aggregate subgrade improvement is used as a cubic yard pay item for undercut applications. When RAP is

blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

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

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

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

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

Add the following to Section 1004 of the Standard Specifications:

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

(a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. The top 12 inches of the aggregate subgrade improvement shall be 3 inches of capping material and 9 inches of crushed gravel, crushed stone or crushed concrete. In applications where greater than 36 inches of subgrade material is required, rounded gravel, meeting the CS01 gradation, may be used beginning at a depth of 12 inches below the bottom of pavement.

(b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials. Non-mechanically blended RAP may be allowed up to a maximum of 5.0 percent.

(c) Gradation.

(1) The coarse aggregate gradation for total subgrade thicknesses of 12 in. (300 mm) or greater shall be CS 01.

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

	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)				
Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20

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

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

Effective: January 1, 1985
Revised: January 5, 2016
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 this 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:

- Traffic Signal Maintenance and Operations Engineer at (847)705-4424
- IDOT Electrical Maintenance Contractor at (773) 287-7600

at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection.

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."

Acceptance of Material.
The Contractor shall provide:

1. All material approval requests shall be submitted a minimum of seven (7) days prior to the delivery of equipment to the job site, or within 30 consecutive calendar days after the contract is awarded, or within 15 consecutive calendar days after the preconstruction meeting, whichever is first.
2. Four (4) copies of a letter listing the vendor's name and model numbers of the proposed equipment shall be supplied. The letter will be reviewed by the Traffic Design Engineer to determine whether the equipment to be used is approved. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.
3. One (1) copy of material catalog cuts.

4. The contract number, permit number or intersection location must be on each sheet of the letter and material catalog cuts as required in items 2 and 3.

Inspection of Construction.
When the road is open to traffic, except as otherwise provided in Section 801 and 850 of the Standard Specifications, the Contractor must request a turn-on and inspection of the completed detector loop installation at each separate location. This request must be made to the Traffic Signal Maintenance and Operations Engineer at (847)705-4424 a minimum of seven (7) working days prior to the time of the requested inspection.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal "turn on." If approved, traffic signal acceptance shall be verbal at the "turn on" inspection followed by written correspondence from the Engineer. If this work is not completed in time, the Department reserves the right to have the work completed by others at the Contractor's expense.

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

Restoration of Work Area.
Restoration of the traffic signal work area due to the detector loop installation and/or replacement shall be included in the cost of this item. All roadway surfaces such as shoulders, medians, sidewalks, pavement shall be replaced as shown in the plans or in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded.

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 Engineer shall mark the location of the replacement loops. The 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" (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" (6.3 mm) deep x 4" (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 Traffic Signal Maintenance and Operations Engineer (847)705-4424 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 water proof tag, from an approved vendor, 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" (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) diameter may be substituted for 6 ft (1.8 m) by 6 ft (1.8 m) square loop(s) and shall be paid for as 24 feet (7.2 m) of detector loop.

Resistance to ground shall be a minimum of 100 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be more than 5.

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.

TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996
Revised: January 2, 2007

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 (Notes 1 & 2)	1090
b.)	Sign Face (Note 3)	1091
c.)	Sign Legends	1092
d.)	Sign Supports	1093
e.)	Overlay Panels (Note 4)	1090.02

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.
Note 2. Type A sheeting can be used on the plywood base.
Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.
Note 4. 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 sign structures or sign panels shall be approved by the Engineer. Any damage to the existing signs due to the Contractor's operations shall be repaired or signs replaced, as determined by the Engineer, at the Contractor's expense.

Signs which are placed on overhead bridge structures shall be fastened to the handrail with stainless steel bands. These signs shall rest on the concrete parapet where possible. The Contractor shall furnish mounting details for approval by the Engineer.

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

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

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

PRECONSTRUCTION VIDEO TAPING

The Contractor shall prepare pre-construction video documentation of all features in the areas affected by construction in the form of two color videos in DVD format. All video cameras, recorders, tapes, accessories and appurtenances shall be high quality DVD format equipment. Pre-construction video documentation shall consist of a series of high-resolution color audio-video digital images showing all areas affected by construction. All pertinent exterior and interior features within the construction's zone of influence shall be shown in sufficient detail to document its pre-construction condition. Features to be shown shall include but not be limited to pavements, curbs, driveways, sidewalks, retaining walls, buildings, landscaping, trees, shrubbery, fences, light posts, interior features and equipment, etc. View orientation shall be maintained by audio commentary on the audio track of each videotape to help explain what is being viewed.

The pre-construction videotaping shall be completed after the initial walkthrough. Two copies of the DVD's depicting all filmed locations shall be submitted to the Village of Glen Ellyn. Construction activities, including material delivery, shall not be performed until the DVDs have been furnished to the Village of Glen Ellyn.

After delivery of the DVD's to the Village of Glen Ellyn, the work shall be paid for at the contract lump sum price for PRECONSTRUCTION VIDEO TAPING, which price shall be payment in full for labor, equipment and material necessary to complete the work as specified herein.

The recording of the video shall be done by a competent and professional person familiar with this type of activity. The Engineer shall determine if the recording meets the above requirements.

PROTECTION OF EXISTING TREES

The Contractor shall minimize trimming of trees in the work corridors and protect the quality of the urban forest. The equipment and methods used to perform any and all portions of the work must be of the size and nature that results in the least disruption to the existing environment.

The contractor shall provide suitable precautions and due diligence to protect the natural and improved features of the area. Special and continuing attention will be paid to the maintenance of tree protection fencing and the appropriate observance of tree protection areas as delineated by the fencing.

The Engineer will approve, authorize or direct all work to be completed. The Engineer will coordinate with a Village Forestry Representative on tree related work items. When the Engineer determines that a deficiency exists, the Engineer shall notify the Contractor. If the Contractor fails to rectify the deficiency immediately, the Engineer will impose a daily monetary deduction for each 24-hour period (or portion thereof) the deficiency exists. This time period will begin with the time of notification to the Contractor and end with the Engineer's acceptance of the corrections. The daily deduction will be $250 per occurrence per calendar day. The Contractor will be liable and responsible for any and all corrective and remedial actions required to restore the area or item to comparable pre-project conditions as well as any additional fines and fees as stated in the tree protection requirements in these specifications.

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

A. Tree Root Pruning:

1. Whenever the proposed excavation falls within the 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 wheel matching the following criteria. The root pruner wheel shall be 60” Diameter (188” Circumference) carrying 28 pair (56 total) stump cutter teeth with tooth spacing at 6.7” on center. The cutting depth shall be 24” and shall utilize a 65hp tractor. Trenching machines will not be permitted. The Engineer shall review and approve all root pruning equipment prior to use.
    c. Exercise care not to cut any existing utilities.
    d. If during construction it becomes evident that additional tree roots will require root pruning, the Engineer shall be notified and the Contractor shall have the root pruning sub- contractor return to the site to properly root prune the tree at the location directed by the Engineer. The contractor will be paid for the additional root pruning as described below; however, no additional compensation will be made for remobilization to the construction site.
    e. For locations where root pruning is performed for the purpose of curb and gutter removal and replacement, the contractor shall root prune 6-inches behind the curbing so as to neatly cut the tree roots.

f. 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.
g. The Engineer will mark locations where earth saw cutting of tree roots is required in the field.

2. All root pruning cuts shall be immediately backfilled with material side cast from the earth-sawing procedure, so that the ground surface is even and no tripping potential exists.

3. If during construction it becomes evident that the Contractor has dug beyond the limits of root pruning, the Contractor will prune the damaged roots at no cost to the Department.

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

B. Tree Trunk Protection:

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. Once the “tree protection zone” is established, it is intended that no work be performed, materials stored or vehicles driven or parked within the fenced areas.

2. The exact location and establishment of the “tree protection zone” fence shall be as determined by the Resident Engineer in the field 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. If work is required within the “tree protection zone”, it shall have the Engineer’s prior approval. All slopes and other areas not re- graded should be avoided so that unnecessary damage is not done to the existing turf, tree root system or ground cover. When work is approved in the “tree protection zone”, all of the work will be performed by hand with the exception that a sod cutter may be used to remove the existing ground cover.

5. The grade within the “tree protection zone” shall not be changed unless approved by the Engineer prior to making changes or performing the work.

The fence shall be 48 inches high, plastic poly-type or any other type of highly visible barrier in an open-weave type pattern with large openings. The type, color and pattern of the fence shall be approved by the Engineer prior to erection. 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. Tree fencing may not be removed until after the landscaping is complete.

TREE TRUNK PROTECTION will be paid for at the contract unit price per EACH. TREE TRUNK PROTECTION includes furnishing, installing, maintaining, and removing the fence, as directed by the Engineer.

C. Augering/Saw Cutting Requirements:

TREE DIAMETER (DBH)	AUGERING/SAW CUTTING SPECIFICATION
2 – 9 inch in diameter	Auger or saw cut 6-foot from face of tree in all directions if trench is located within this radius.
10 - 14 inch. in diameter	Auger or saw cut 10-feet from face of tree in all directions if trench is located within this radius.
15 - 19 inch. in diameter	Auger or saw cut 12-feet from face of tree in all directions if trench is located within this radius.
Over 19 inch in diameter	Saw cut 15-feet from face of tree in all directions if trench is located within this radius.

DBH = Diameter Breast Height, measured at 4.5-ft. above ground.

These augering specifications can be amended as needed by the Engineer.

D. Tree Limb Pruning

1. The Village will prune tree limbs prior to start of the project. The Contractor shall inspect the work site in advance and may request, in writing, additional areas of limb pruning that might be damaged by equipment operations. The Engineer will review the request and have final authorization as to whether the additional

pruning will be allowed. Tree limbs that are broken by construction equipment after the initial pruning must be reported to the Engineer within 24 hours. Correction cuts that are necessary will be pruned by others at the Contractor's expense. The Contractor will also be responsible for any additional maintenance as described in these specifications.

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 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 equipment shall be Grad-all (or similar method), or by hand or a combination of these methods. The method of removal shall be approved by the Engineer prior to commencing any work.

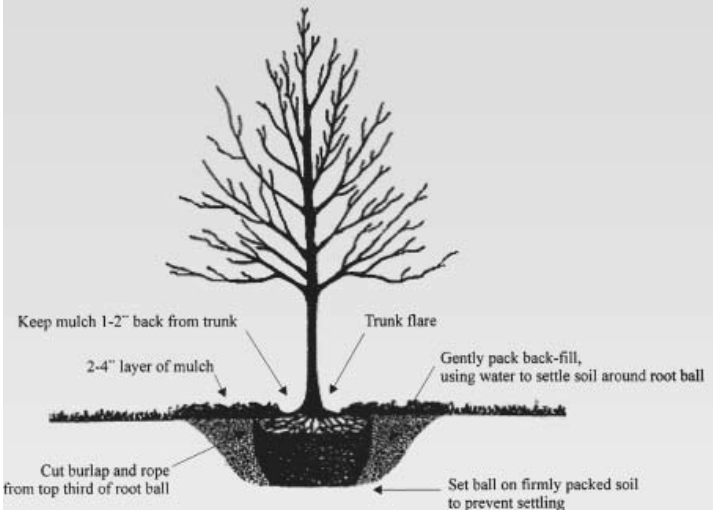
3. Any pavement or pavement related work that is removed should be immediately disposed of from the area and shall not be stockpiled or stored within the parkway area under any circumstances.

F. Backfilling and Mulching:

1. All backfill material within the turf area in back of the curb, which is not selected trench backfill material, shall be pulverized topsoil meeting the requirements of Section 211 of the Standard Specifications. Excavated spoil material will not be permitted as an acceptable backfill material. 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 inch (1"), unless otherwise directed by the Engineer. No grading will be allowed within the drip-line of any tree unless directed by the Engineer.

2. The Contractor shall provide shredded tree bark mulch meeting the requirements of Section 251 of the Standard Specifications and shall be dark, premium hardwood bark mulch, shredded, double processed, non-dyed around all parkway trees. The area of mulching will depend on the size, location and adjacent grades, but shall be a minimum of three inches (3") deep. In no case will the limits of the mulch material be less than the area of existing mulch and/or less than 24" from the face of the tree unless otherwise directed by the Engineer.

Tree mulching will be included in the cost of TREE TRUNK PROTECTION for existing trees or the new tree pay item.



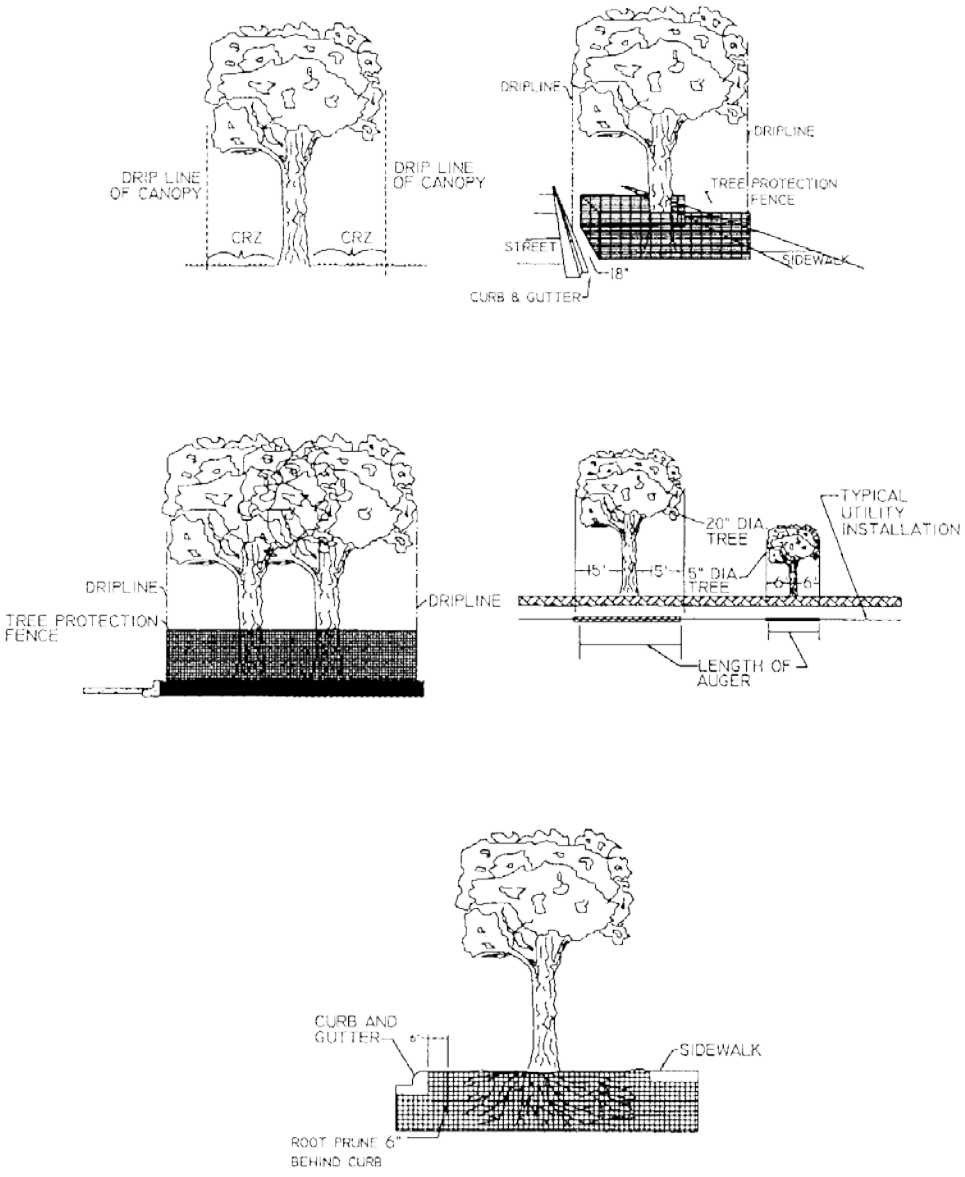
G. Damages:

1. In the event that a tree is injured such that potential irreparable damage may ensue, as determined by the Engineer, the Contractor shall be held liable for the full value of the tree based upon the guideline entitled Guide for Plant Appraisal, latest Edition. The Contractor shall cause to be paid to the Village of Glen Ellyn either by direct payment to the Village or a deduction from the contract the full amount of replacement worth as determined by the guideline.

2. Replacement of shrubs, small trees, plants and evergreens shall be furnished, delivered and planted of the same species, variety and size of which they are to replace. The replacement shall be as specified in the Standard Specifications and at locations determined by the Engineer.

3. Special attention is called to the Contractor with regard to the “tree protection zone” of this specification. It is important that the trees and shrubs that 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 fails to erect and maintain tree protection fencing and/or 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. The Contractor will also be responsible for costs associated with

fertilization and during construction as deemed necessary. The anticipated costs will be deducted from the contract.



SAWCUTTING

Unless otherwise indicated in the Special Provisions, sawcutting operations associated with the conduct of the project shall be considered included in the cost of the work item being performed. The Contractor shall be responsible for removing the residue created by sawcutting operations in a manner acceptable to the Engineer. The resulting surface shall be sufficiently clean so that no tracking of residue by vehicles or pedestrians occurs.

COMBINATION CONCRETE CURB & GUTTER REMOVAL & REPLACEMENT

This work shall consist of the removal and replacement of any existing curb and gutter (various types) at the locations shown on the engineering drawings or as directed and marked by the Engineer in the field in accordance with Sections 202, 351, 440 and 606 of the Standard Specifications for Road and Bridge Construction and as described herein.

The construction of concrete curb and gutter shall include the excavation for and placement of a minimum of 4" CA-6 Aggregate Base in accordance with Sections 202 and 351 of the Standard Specifications, if the existing aggregate base is considered unsuitable by the Engineer. The excavation for the curb and gutter, the placement and compaction of 4" CA-6 Aggregate Base, furnishing and installing tie bars, furnishing and installing expansion joints with dowel bars, the disposal off-site of the excavation material and the curing and protection in accordance with the Standard Specifications shall be included to the contract unit cost per foot for COMBINATION CONCRETE CURB & GUTTER, REMOVAL and COMBINATION CONCRETE CURB & GUTTER, with the type of curb and gutter specified thereafter.

Measurement will be made along the flow line of the gutter and along the face of concrete curb, which measurement will include drainage castings incorporated in various curbs and curbs and gutters but will exclude entrances, inlets, and outlets for gutters and outlets for combination curb and gutters.

PROTECTIVE COAT AND CURING OF PORTLAND CEMENT CONCRETE

Protective Coat shall be applied as directed by the Engineer to concrete gutter flags, faces and tops of curbs, sidewalks and driveway pavements in accordance with the requirements of Article 420.18 of the IDOT Standard Specifications except that it shall be applied regardless of the time of year.

The Portland Cement Concrete surface shall be cured in accordance with Article 1020.13 of the IDOT Standard Specifications with the following exception: "On non-traffic Portland Cement Concrete surface areas, the use of linseed oil emulsion curing compound will be permitted. The linseed oil curing compound shall meet the requirements of Article 1022.01 of the IDOT Standard Specifications. In addition, the oil phase of the emulsion shall consist of 85 percent by volume boiled linseed oil and 15 percent by volume Z-8 bodied linseed oil. The linseed oil emulsion curing compound shall be applied with a mechanical sprayer meeting the requirements of Article 1101.09(b). Membrane curing will not be permitted between November 1 and April 15."

The protective coat will be paid for at the contract unit price per square yard for PROTECTIVE COAT, which price shall be payment in full for furnishing all materials, labor and equipment necessary to complete the work as herein specified and to the satisfaction of the Engineer. The curing will not be paid for separately but shall be included in the item requiring curing.

BRICK PAVER REMOVAL

This work shall consist of the removal and disposal of existing brick pavers, regardless of type, at locations indicated on the plans or as directed by the Engineer.

This work shall be paid for at the contract unit price per square foot for BRICK PAVER REMOVAL, which price shall include all equipment, labor, and materials needed for a complete removal and disposal.

HOT-MIX ASPHALT DRIVEWAY REMOVAL AND REPLACEMENT

This work shall be in accordance with Sections 202 and 406 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of sawcutting and removing existing hot-mix asphalt driveways to the limits shown on the plans and as directed by the Engineer. Driveways will be constructed according to the detail shown in the plans and shall include aggregate base.

This work shall be paid for at the Contract unit price per square yard for HOT-MIX ASPHALT DRIVEWAY REMOVAL AND REPLACEMENT, in accordance with section 406 of the Standard Specifications, additionally, this pay item shall include the sawcutting, excavation and removal of the existing driveway and any other excavation as required to place the new driveway, and the disposal of any excavated material.

PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT

This item shall consist of the construction of driveway pavements as per detail and at locations shown on the engineering drawings or as directed by the Engineer. This item shall include all earth excavation that is required including lowering, widening, and/or relocating to construct the driveway pavement as depicted in the engineering drawings and/or directed by the Engineer.

The driveway shall be constructed on an aggregate base consisting of a 4-inch (minimum) thickness of compacted CA-6 on a dry natural or compacted subgrade.

Driveways shall have a minimum thickness of 6 inches for residential area and 8" for commercial driveways. The concrete shall meet the requirements of Article 1020 of the IDOT Specifications for Class PV portland cement concrete and reinforced with fiber mesh additive.

Formwork for PCC Driveway Pavement shall be a minimum of 2x6. No 2x4 forms will be allowed during construction.

This work will be paid for at the contract unit price per square yard for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, of the thickness specified, which shall include payment for the earth excavation, fiber mesh additive and all work specified herein.

PORTLAND CEMENT CONCRETE SIDEWALK

This item shall consist of the construction of sidewalks as per detail and at locations shown on the engineering drawings or as directed by the Engineer. This item shall include all earth excavation that is required including lowering, widening, and/or relocating to construct the sidewalk as depicted in the engineering drawings, to meet compliance with ADA curb ramp slope requirements and/or as directed by the Engineer.

The Concrete shall conform to Section 1020 of the IDOT Specifications for Class SI Portland Cement Concrete.

Construction shall conform with all the applicable requirements of Section 424 of the IDOT Specifications except as modified herein.

The sidewalk shall be constructed on an aggregate base consisting of a 4-inch (minimum) thickness of compacted CA-6 on a dry natural or compacted subgrade. The sidewalk shall have a minimum thickness of 5 inches which shall be increased to 6 inches at residential driveways and key walks or 8" at commercial driveways.

Formwork for P.C.C. Sidewalk shall be a minimum of 2x6. No 2x4 forms will be allowed during construction.

Sidewalk at driveways shall be reinforced with fiber mesh additive.

The sidewalk shall be constructed with contraction joints spaced evenly at five foot intervals. The contraction shall be one inch in depth and may be either saw cut or tooled at the time of finishing.

Expansion joints consisting of 3/4" preformed joint filter shall be placed wherever the sidewalk abuts all curbs, driveways, poles, or other structures. The expansion material shall extend for the full depth of the concrete.

Curb ramps will be measured for payment as sidewalk. No deduction will be made for detectable warnings located within the ramp.

This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK, of the thickness specified, which shall include payment for the excavation, fiber mesh additive, expansion joints, contraction joints, excavation and disposal of extra soil materials, and all work specified herein. Areas for the 6” and 8” thick sidewalks will be included and paid for in this pay item along with thickened edges and ties bars when constructed adjacent to concrete curb and gutter.

DETECTABLE WARNINGS

This work shall consist of providing all labor, materials, tools and equipment necessary to install cast-in-place detectable warnings with a truncated dome pattern. Detectable warnings shall be a prefabricated, cast-in-place system. Stamped concrete will not be allowed. The color shall be as close a match as possible to Federal Standard Color 30166, Brick Red. Detectable warnings shall be cast-in-place systems manufactured by ADA Solutions (Cast-In-Place Systems) or Armor Tile (Cast-In-Place Systems). Contractor shall provide a sample of the proposed panel for inspection and approval by the Village prior to installation.

The work will be done in conjunction with PORTLAND CEMENT CONCRETE SIDEWALK where shown on the engineering drawings or as directed by the Engineer. Detectable warning panels must be installed across the entire width of the depressed curb, perpendicular to the direction of travel and per the standard details. At locations of curved ramps, additional areas may be required to achieve the required dimensions and direction of truncated dome pattern.

Construction shall conform to the requirements of Section 424 of the IDOT Standard Specifications except as modified herein.

This work will be paid for at the contract unit price per square foot of DETECTABLE WARNINGS, which price shall include all costs in full for materials, tools, labor, equipment and all work necessary to furnish and install the detectable warning panels per the engineering drawings and details. Concrete sidewalk will be paid for separately as PORTLAND CEMENT CONCRETE SIDEWALK, of the thickness specified.

SODDING

This work shall consist of preparing the ground surface, furnishing and placing topsoil to a 4" minimum depth, fertilizing the areas to be sodded as specified and furnishing and placing the sod. The sod shall be predominately Kentucky Bluegrass. The preparation of the ground surface shall include the removal of the existing sod and any excavation, if necessary, of the existing ground to obtain the required 4 inches minimum depth of topsoil. This excavation will not be paid for separately, but shall be included in the cost of Sodding. All work shall be performed in accordance with the applicable requirements of Sections 211 and 252 of the IDOT Standard Specifications. All grass areas that are disturbed due to installation of the new pavement, sewer service, fire hydrant and appurtenant construction as approved by the Engineer shall be restored by sodding.

180 pounds of fertilizer nutrients per acre shall be applied at a 1:1:1 ratio as follows:

Nitrogen Fertilizer Nutrients	60 lbs./acre
Phosphorus Fertilizer Nutrients	60 lbs./acre
Potassium Fertilizer Nutrients	60 lbs./acre

Watering shall be done as directed by the Engineer, in accordance with the requirements of Articles 252.08 and 252.09 of the IDOT Standard Specifications.

The sodded areas shall be guaranteed by the Contractor for a period of one year after installation. During this period all defective areas caused by inadequate watering, salt damage, pedestrian and traffic damage, shall be repaired at the Contractor's expense.

Special attention is called to the Special Provision for use of Village water. The Village and/or Engineer reserves the right to postpone placement of sod if weather conditions are found to be unsuitable for effectively growing sod. The Contractor will be responsible to keep all weeds and/or other vegetation under eight inches (8") in height. Weed control will not be paid for separately, but shall be included in the cost of Sodding.

This work shall be measured in place and the area calculated in square yards and will be paid for at the contract unit price per SQUARE YARD for SODDING. TOPSOIL FURNISH AND PLACE, 4", NITROGEN FERTILIZER NUTRIENT, PHOSPHORUS FERTILIZER NUTRIENT, and POTASSIUM FERTILIZER NUTRIENT will be pay for separately. SUPPLEMENTAL WATERING will be paid for at the contract unit price per UNIT applied to sodded areas.

TRENCH BACKFILL

Selected granular backfill (also referred to as trench backfill throughout) shall be in accordance with Section 208 of the IDOT Standard Specifications and Article 20-4.06 of the Illinois Water and Sewer Main Specifications. Backfill shall be crushed stone, gradation CA-6, meeting the requirements of Article 1004.05 of the IDOT Standard Specifications. Recycled concrete materials from approved and tested stockpiles will be allowed if approved by the Engineer. The material shall be deposited in uniform layers not exceeding six inches thick (loose measure) and each layer shall be compacted by mechanical ramming or tamping in a manner approved by the Engineer except that if desired results are being obtained, the compacted thickness of any lift may be increased to a maximum of 8-in. Compaction shall be not less than 95% of the standard proctor laboratory density. Trench backfill shall be measured for payment as described in Section 208.

Trench Backfill shall be required for all sewer and water main where any portion of the trench lies under or within 2' of existing or proposed streets, curb & gutter, aggregate shoulder, sidewalks, and driveways. All CA-6 material placed in such trenches shall be mechanically compacted in maximum eight inch lifts.

The quantity for which payment will be made shall not exceed the volume of the trench as computed using the maximum width of trench permitted per the Standard Specification for Water and Sewer Main Construction in Illinois, latest edition, and the actual depth of the completed trench backfill above the center of the pipe with a deduction for the volume of one half of the pipe and up to the bottom of the proposed street sub-base. The Contractor at his/her own expense shall furnish any trench backfill required in excess of the maximum quantity herein specified.

Basis of Payment

Trench Backfill will be paid for at the contract unit price per CUBIC YARD for TRENCH BACKFILL.

EXPLORATION TRENCH, SPECIAL

This item shall consist of excavating a trench at locations as directed by the Engineer and shown on the plans for the purpose of locating existing water service, sanitary sewer lines, or other existing utility conflicts within the construction limits of the proposed improvements. A nominal quantity of exploratory excavation has been included in the schedule of prices for the purpose of establishing a unit price for this item of work.

The trench shall be deep enough to expose the existing utility. The width of the trench shall be sufficient to allow proper investigation to determine the depth and condition of the utility.

The Contractor shall familiarize himself with the locations of all underground utilities of facilities as outlined in Article 107.31 of the Standard Specifications and shall save such facilities from damage.

The exploration trench shall be backfilled with trench backfill meeting the requirements of the Standard Specifications, the cost of which shall be paid for at the contract price per CUBIC YARD for TRENCH BACKFILL.

This item shall include ALL labor and material necessary to saw cut and remove the pavement, excavate the utility, and to maintain the trench so as to be safely passable to the motoring public. All materials used to backfill the excavated area, top off the trench, or repair any damaged utilities shall conform to the appropriate specifications as noted by this contract or as approved by the Engineer.

All materials resulting from this work shall be disposed of at the contractor's expense, outside the limits of the job, at locations acceptable to the Engineer and in accordance with Section 107.01 of the Standard Specifications, as amended by Public Act 90-761. A sample of the required load ticket is included in this contract.

Basis of Payment

This item shall be measured for payment per FOOT for EXPLORATION TRENCH, SPECIAL as designated by the Engineer regardless of the depth necessary to obtain the required data. No additional compensation will be allowed for any delays, inconvenience or damage sustained by the Contractor in performing the work.

Exploratory excavation to determine the exact location and depth of sanitary service risers and sanitary service lines shall be paid for separately at the contract unit price each for EXPLORATION EXCAVATION (UTILITY), which will be payment for all labor, material and equipment required to locate the service. Any utility damaged due to Contractor's negligence shall be repaired by the Contractor at his own expense.

TELEVISING OF SEWERS

All newly installed sanitary and storm sewer mains within the project limits shall be inspected by closed circuit TV before acceptance. All testing of sanitary sewers shall be witnessed and approved by the Engineer as coordinated with the Village before final acceptance. The entire length between manholes of sewer sections shall be televised.

The Contractor shall submit two copies of the color digital record (in DVD format) of the sewer and 2 copies of the televising report to the Engineer, showing distance between manholes, location of service connections, direction of flow and direction of TV camera during televising.

Prior to televising, the Contractor shall flush and clean all sewers. If the sewers are found not to be clean during televising, the Contractor will be required to flush and clean and re-televise said sewers found not to be clean.

Unless otherwise specified, sewers must be straight between manholes. They may be tested for straightness by flashing a light from manhole to manhole, lamping, or by other suitable means.

All televising shall be recorded from manhole to manhole.

The timing of the televising of sewers is of the utmost importance. No roadway work will be allowed until the video records have been viewed and accepted with the approval of the Engineer.

Pre-construction televising will be required of the existing sanitary sewer main and storm sewer throughout all areas of construction as well as the sanitary sewer laterals from Maiden Lane to Fairview Avenue. Post-construction televising will be required for newly installed storm sewer, newly installed sanitary sewer and the sanitary main from Maiden Lane to Fairview Avenue.

The cost of televising sanitary sewers shall be paid for at the contract unit price per foot for TELEVISION INSPECTION OF SEWER and the cost of televising storm sewer shall be paid for at the contract unit price per foot for TELEVISION INSPECTION OF SEWER, SPECIAL, which price shall include all materials, equipment and labor required for the successful televising of all sewer sections. If the inspected sewers are not acceptable, the problems found shall be repaired and the TV test repeated until satisfactory at no additional cost to the Village.

BEDDING FOR UNDERGROUND UTILITIES

All PVC sewer pipe, shall be placed in granular bedding extending from 6 inches below the pipe to 12 inches above the pipe. Bedding for DIP or concrete pipe shall extend 6 inches below the pipe to the pipe spring line. Bedding material shall be crushed stone or crushed gravel of gradation CA- 7 or CA-11 conforming to ASTM D2321 for Class I material.

Granular bedding shall not be paid for separately, but shall be considered included in the cost of the cost of the water main or sewer pipe.

UNDERCUTTING FOR UTILITIES

This work shall consist of the excavation and disposing of unsuitable material during construction of proposed utilities and backfilling with compacted CA-11. This work shall conform to all applicable portions of Section 202 of the IDOT Standard Specifications. The maximum undercut will be 12 inches. This work shall only be performed at the locations identified on the engineering drawings or designated by the Engineer.

The Contractor shall notify the Engineer before commencing the work in order to permit accurate measurements. Any undercut and backfill performed before measurements have been made will not be paid for. All unsuitable materials removed shall be disposed of off-site.

This work shall be measured for payment in accordance with Section 202.07 of the IDOT Standard Specifications. The volume will be computed by the average end areas method.

This work shall be paid for at the contract unit price per cubic yard for SELECT GRANULAR BACKFILL, SPECIAL, which price shall include all labor, materials and equipment to remove and dispose of existing unsuitable material, furnish and place geotextile fabric, and install the compacted CA-11 material.

SANITARY AND STORM SEWER REMOVAL

This work shall consist of the removal and disposal of existing storm and sanitary sewers in accordance with the requirements of Section 551 of the IDOT Standard Specifications except as modified herein.

The sewer removal shall end either at a bell joint or at a location at the existing pipe that has been saw cut to provide a smooth, even surface that will permit a watertight joint when connected to the proposed sewer. All debris and earth shall be removed from the interior of the portion of the existing sewer pipe which is to remain in place. All excavated material shall be legally disposed off site.

Removed pipes or structures shall be disposed of by the Contractor in accordance with Article 202.03 of the IDOT Specifications.

Abandoned utility pipe ends shall be plugged with brick and mortar or concrete. This work is considered included in the cost of the sanitary or storm sewer pay items.

Trenches resulting from the removal of sewers shall be backfilled with Trench Backfill. This work is considered included in the cost of the sanitary or storm sewer pay items unless specified for payment under a different pay item.

Removal of existing sanitary or storm sewer will be paid for at the contract unit price per foot for STORM SEWER REMOVAL, measured as removed and shall include trench backfill.

STRUCTURE ADJUSTMENTS

This work shall consist of the adjustment and/or the reconstruction of existing catch basins, manholes, inlets, or valve vaults in accordance with the appropriate articles of Section 602 of the Standard Specifications. All adjustment rings and castings for sanitary manholes shall have an exterior rubber chimney gasket. Adjustments less than 3" shall require HDPE adjusting rings and adjustments greater than 3" shall require concrete adjusting rings.

ALL STRUCTURES within the pavement shall have their frame and lids removed, the structure shall then be plated and then topped off with an approved aggregate material just prior to any bituminous removal operation. The structure shall be brought back to grade within 5 working days, or at any time sooner as requires by the Owner.

Once removed, all frames and lids shall be disposed of by the Contractor. The cost of this disposal shall be included in the cost of the contract.

In addition to the requirements as described in Section 602 of the Standard Specifications, it shall be the responsibility of the contractor to clean ALL existing structures that are to be adjusted or reconstructed. The cleaning shall consist of the removal of all debris from inside the structure to the satisfaction of the Engineer. Catch basins and manholes are to be cleaned immediately prior to the adjustment or reconstruction to ensure that all portions of the structure requiring repair are identified and repaired upon completion of all work. Cleaning of the structures will not be paid for separately but should be considered included in the cost of the structure adjustment.

All existing storm manholes, sanitary manholes and valve vaults to be adjusted shall have the frame and lid replaced with the Standard Village manhole frame and cover. The frame and cover shall be East Jordan Iron Works (EJIW) Catalog Number 1022-2 (Neenah R-1772-A) with Heavy Duty solid Cover (minimum assembled weight of 300 lbs.). "VILLAGE OF GLEN ELLYN" and the applicable word "STORM", "SANITARY" or "WATER" shall be cast in the cover in 2-inch raised letters. This will be included in the price of MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID, SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED

LID and VALVE VAULTS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID.

During the contract, should any casting be damaged by the Contractor or by traffic prior to the completion of the contract, the contractor shall replace the damaged casting at no cost to the Village. Castings previously damaged or scheduled for replacement shall be supplied by the Contractor.

All determinations as to the suitability or the cause of damage to a casting shall be made by the Engineer, and shall be binding. Tightened bolts with nuts and washers are to be used for catch basins or inlet frame back adjustments (new or existing), the cost of which shall be included in the cost of the adjustment.

Curing and protection of concrete shall be in accordance with the appropriate articles of Sections 1022 and 1020.13 of the Standard Specifications as amended herein.

This work will be paid for at the contract unit price each for:

SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID
SANITARY MANHOLES TO BE RECONSTRUCTED WITH NEW TYPE 1 FRAME, CLOSED LID
MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID
INLETS TO BE ADJUSTED
INLETS TO BE ADJUSTED WITH NEW TYPE 3 FRAME AND GRATE
INLETS TO BE ADJUSTED WITH NEW TYPE 4 FRAME AND GRATE
GAS VALVE TO BE ADJUSTED
VALVE VAULTS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID
VALVE BOXES TO BE ADJUSTED

Where the frames are to be removed and structures plated prior to bituminous surface removal, no additional compensation shall be considered for payment, as the contract unit price should reflect the need for this additional process. All labor and material necessary to lower the structure and provide for proper plating of the structure shall be considered included in the price of the structure adjustment or reconstruction.

STORM SEWERS

Storm sewers shall be constructed of reinforced concrete pipe (RCP), Ductile Iron Pipe (DIP) or Polyvinyl Chloride (PVC), as shown on the engineering drawings.

A. REINFORCED CONCRETE PIPE

Except as otherwise specified, reinforced concrete pipe shall conform to ASTM C-76.

The sewer shall be constructed with rubber gasketed (O-ring) joints meeting the requirements of ASTM C-361 for Reinforced Concrete Low Head Pressure Pipe or ASTM C-443 Joints for Concrete Pipe and Manholes, Using Rubber Gaskets. The bell and spigot or tongue and groove ends shall be formed on machine rings formed to ensure accurate joint surfaces and shall be stepped to accommodate a round compression type rubber gasket.

Rubber gaskets shall be extruded or molded in such a manner that any cross section will be dense, homogeneous, and free of porosity, blisters, pitting and other imperfections. The gaskets shall be fabricated from a high grade rubber compound containing no reclaimed rubber. The basis polymer shall be natural rubber, synthetic rubber or a blend of both. The physical properties of the rubber gaskets and the permissible variations in dimensions shall conform to the requirements of those specified in the specifications for Rubber Gaskets, ASTM Designation C-361 or C-443.

The gaskets shall be seated on the joint in accordance with the manufacturer s specifications. Where adhesive is required to properly seat the gasket, the gasket shall be applied not less than 24 hours prior to installing the pipe.

When the pipe is lowered into the trench, installers shall make certain that no dirt is clinging to the jointing surface or lodged under the gasket. The gasket and inside surface of the groove shall be thoroughly lubricated as specified by the gasket manufacturer. The tongue end shall be carefully centered in the groove so as to avoid the displacement of the gasket, and the pipe shall be driven home, fully deforming the gasket, by use of a cable and winch set inside the pipeline, at least two pipe lengths back, or by other methods approved by the Engineer. Adjustment to line and grade shall be made in such a manner as not to disturb the deformed gasket.

B. DUCTILE IRON PIPE

Ductile iron pipe shall be Class 52 with push-on joints having a minimum wall thickness of 0.31 inches. Fittings shall be ductile iron compact fittings with mechanical joints conforming to the requirements of ANSI/AWWA C110/A21.10.

C. PVC Pipe

PVC storm sewer pipe 12” and less shall meet the requirements of ASTM Specification D2241, with a Standard Dimension Ratio (SDR) of 26 or as specified on the engineering drawings. PVC storm sewer pipe larger than 12” shall meet the requirements of AWWA C905, with a Dimension Ratio (DR) of 25 or as specified on the engineering drawings.

The pipe joints shall be elastomeric gasket (push-on) type in compliance with the requirements of ASTM D3139.

Storm sewers shall be tested by closed circuit T.V. before acceptance. The costs for televising will be included with TELEVISION INSPECTION OF SEWER, SPECIAL (See Special Provision TELEVISING OF SEWERS).

Method of measurement shall be as specified in Article 550.09 of the IDOT Standard Specifications.

Payment will be made at the contract unit price per foot for STORM SEWERS, of the material, size, and type specified, or STORM SEWER INSTALLATION 6”, which shall be payment in full for all excavation, and bedding, for all sheeting, shoring, dewatering, and connections between different pipe materials.

Pipe connections to an existing manhole will be paid at the contract unit price per each for PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE, which shall include all labor, materials, and equipment to core the existing manhole and make the connection with the proposed storm sewer.

Manholes to be set over an existing pipe will be paid at the contract unit price per each for PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER, which shall include all labor, materials, and equipment to sawcut and dispose the existing pipe section and connect the existing pipes to the manhole.

Any sanitary services that may conflict with the proposed alignment of the storm sewer main shall be cut and reconnected with the approval of the Engineer. Homeowners shall be notified before cutting of service. Services removed and replaced will be paid for per per foot of SANITARY SEWER of size specified. Any services removed by the Contractor for his convenience shall be reconnected at his own expense.

STORM DRAINAGE STRUCTURES

All manholes, inlets and catch basins shall be constructed of precast reinforced concrete in accordance with the details shown on the engineering drawings, and shall be furnished complete with a cast iron frame and grate, frame and lid or curb box, as shown on the engineering drawings.

All work shall be performed in accordance with the applicable requirements of Section 602 of the IDOT Standard Specifications.

This work will be paid for at the contract unit price each for INLETS, CATCH BASINS or MANHOLES of type and diameter specified, which price shall include, sand cushion, flat slab tops, and all excavation, backfilling and connection to sewer. All frames, grates, curb boxes, and lids will be paid for separately at the contract unit price per each for the pay items listed below.

The designations for frames and grates to be installed are East Jordan Iron Works or Neenah catalog numbers and are provided to establish the style and weight of casting desired. Open lid structures shall have “DUMP NO WASTE” and “DRAINS TO RIVER” cast into the frame.

Standard Village manhole frame and cover shall be East Jordan Iron Works (EJIW) Catalog Number 1022-2 (Neenah R-1772-A) with Heavy Duty solid Cover (minimum assembled weight of 300 lbs.). “VILLAGE OF GLEN ELLYN” and the word “STORM” shall be cast in the cover in 2-inch raised letters. This will be paid for as SPECIAL FRAME, CLOSED LID per each at the contract unit price.

For most conditions with barrier curb: EJIW 7000 with Type T1 Back and Type M1 Grate (Neenah R-3275). In depressed curb situations, use EJIW 7000 with Type M3 Flat Grate. For B-6.12 curb applications, widen gutter section to accommodate the larger grate section. This will be paid for as FRAME AND GRATE, SPECIAL per each at the contract unit price.

For lawn areas: Beehive-type, EJIW 6527 (Neenah R-4340-B). This will be paid for as SPECIAL GRATE NO. 2 per each at the contract unit price.

For ditches: Ditch Grate, Stool Type, EJIW 6489 (Neenah R-4342). This will be paid for as SPECIAL GRATE NO. 1 per each at the contract unit price.

In addition to being bolted to the frame, curb opening castings shall be supported against the structure and/or adjusting rings with concrete wedges mortared in place to prevent settlement of the curb opening casting.

STORM SEWER SERVICE

This work shall consist of all labor, material and equipment required to construct a 6" PVC storm sewer service, connect the proposed 6" PVC storm sewer service to an existing or new sewer, and the installation of a PVC cleanout at the end of the new storm sewer service installed.

When the connection is directly to the storm sewer main pipe, the host pipe will be cored and the 6" PVC storm sewer connected with an INSERTA-TEE connection. When the connection is to a storm sewer manhole, inlet or catch basin, the host structure shall be cored and the 6" PVC storm sewer installed using a flexible boot or inserted into place with hydraulic cement. Connection to existing or proposed manholes and structures by new storm sewers 8" in diameter and larger will be considered included in the cost of the proposed storm sewer pipe item.

PVC storm sewer pipe shall meet the requirements of ASTM Specification D2241, with a Standard Dimension Ratio (SDR) of 26 or as specified on the engineering drawings.

The pipe joints shall be elastomeric gasket (push-on) type in compliance with the requirements of ASTM D3139. The pipe shall be installed up to the right-of-way and include a 4" cleanout with an end cap.

The cleanout tee shall be a 6" X 6" X 4" PVC tee installed at the location directed by the Engineer. The cleanout riser pipe shall be 4" PVC with a 4" PVC cap and screw plug installed with the square nut in the inverted position. A 3' long piece of #6 steel rebar shall be driven into the lawn area adjacent to the cleanout to aid in future locating of the cleanout. The cleanout tee shall be plugged on the future-use side (house side) with a water-tight plug or be connected to an existing storm sewer service line if one already exists at the location of the proposed cleanout.

This storm service pipe will be paid for at the contract unit price per foot for STORM SEWERS (SPECIAL), 6". The cleanout tee and connection at each property will be paid for together at the contract unit price per each STORM SEWER CONNECTION, SPECIAL.

STRUCTURE REMOVAL

The work shall consist of complete removal of the storm structures outlined by the contract drawings and identified by the Engineer. If the storm structure is considered suitable by the Engineer for future use it shall be salvaged, otherwise disposed of according to Article 202.03 of the Standard Specifications.

This work shall be paid for at the contract unit price per each for REMOVING INLETS, which shall include all equipment, labor, and materials required to perform the work as specified.

SANITARY SEWER SERVICE REPLACEMENT

Where shown on the engineering drawings or directed by the Engineer, existing sanitary services shall be replaced using PVC SDR 26 ASTM D2241, and per details shown on the engineering drawings. The sanitary services will generally include three components: a new factory wye or tee-wye fitting to the sewer main, new 6" pipe and a service line cleanout located in the parkway in front of the residence being served in accordance with the following descriptions. Contractor should note that the depth of the existing sanitary sewer main (to the top of the pipe) for this project varies from approximately 5' to 15'. Bidders shall adjust their prices for the various pay items accordingly.

Contractor shall locate each active existing house sewer service during construction, determine/verify pipe materials and confirm with the Engineer the scope of work (length, location, materials, etc.) required for each service replacement. The Village has acquired for its use, certain information relating to the location of wyes and break-ins in the existing sanitary sewers. This information is shown on the sewer TV inspection report on a digital video disc (DVD) or videos online. To review the available data, the Contractor should contact the Department of Public Works, 30 South Lambert Road, Glen Ellyn. Contractor shall use this information for whatever value they consider it worth, since locations are not guaranteed.

Engineering drawings may show multiple sanitary services in one property because the sewer TV inspection report does not show conclusive evidence of which service is not active. The Contractor shall verify inactive break-ins and wyes by making contact with the Village of Glen Ellyn Public Works Department and with residents of each property and having them flush a toilet and/or performing other investigations to determine active use. When a sanitary service is found inactive, Contractor shall plug it watertight with a factory-made plug, and shall record its location. Contractor shall maintain the flow from the active sanitary services at all times.

A. SANITARY SERVICE EXPLORATION

At locations designated by the Engineer, Contractor shall do an exploratory excavation to determine the exact location and depth of the service riser and service line. This work will be paid for at the contract unit price foot for EXPLORATION EXCAVATION (UTILITY), which will be payment for all labor, material and equipment required to locate

the service. Any utility damaged due to Contractor's negligence shall be repaired by the Contractor at his own expense.

B. SANITARY SERVICE CONNECTION TO EXISTING SEWER MAIN

Sanitary service pipe reconnection shall consist of all labor, material and equipment required to remove and replace the existing clay tee/wye connection at the existing main. The work as described herein will be paid for at the contract unit price each for SANITARY SEWER SERVICE TEE, which will be payment for verification if the service is active, all excavation, bedding, backfill (including trench backfill to the existing pavement), sheeting, shoring, dewatering and any other associated work.

The item cost will also include furnishing and installing five feet of 8" PVC sanitary sewer main line pipe. The connection to the existing pipe shall be made with a No-Shear Flex Coupler secured with stainless steel bands. Contractor shall take extra care in connecting to the existing clay pipe sanitary sewer main. Cost of installing over five feet of main line pipe due to Contractor's negligence shall be at no additional expense to the Village.

C. ADDITIONAL SANITARY SEWER MAIN REPLACEMENT

If directed by the Engineer, Contractor shall increase the length of the main line replacement with PVC SDR26 ASTM D2241 pipe. This additional PVC pipe will be paid for separately at the contract unit price per foot for SANITARY SEWERS, PVC of the size specified, which price will include all excavation, bedding and backfill (including trench backfill to the existing pavement).

D. SANITARY SEWER SERVICE PIPE

All 6" sanitary sewer PVC SDR26 ASTM D2241 service pipe and fittings will be paid for separately at the contract unit price per foot for SANITARY SEWER SERVICE 6" which price shall include all excavation, bedding and backfill (including trench backfill up to the existing pavement or ground) and connection to the existing house service. The lateral pipe will be installed as shown on the details in the engineering plans. The extent of the sanitary sewer service pipe replacement shall generally be to a point 10 ft. beyond the back of new curb.

E. SANITARY SEWER CLEANOUT

This work shall consist of all labor, material and equipment necessary to excavate and install six inch tee, riser with frame and cover, and the connection to the existing sanitary sewer services as depicted in the engineering drawings. An EJIW 1566 (NEENAH R-1975-A2) cast iron frame and cover (cast with the letter "S") shall be

utilized for all sanitary cleanouts located in driveway areas. For cleanouts in lawn areas, a 6" brass cleanout flush plug with square head, Sioux 877-60, shall be utilized. In addition, a 3' long piece of #6 rebar shall be driven into the lawn area adjacent to the cleanout. The location of the cleanout shall generally be to a point 10 ft. beyond the back of new curb.

This work shall be paid for at the contract unit price each for SANITARY SERVICE CLEANOUT installed, which price will include all excavation, bedding, backfill (including trench backfill), furnishing and installing the 6" PVC pipe and fittings, screw cap, frame and cover and making the connection to the existing house service.

F. ADJUSTING SANITARY SEWER SERVICE LINES

This work shall be in accordance with Section 563 of the IDOT Standard Specifications except as modified herein. Service line adjustments will only be required for existing services to remain that will be in conflict with the proposed sewer construction. This work will be paid for at the contract unit price per foot for 6" PVC SEWER SERVICE PIPE REPAIR ACROSS TRENCH, which price shall be payment in full for furnishing all materials, fittings, labor and equipment necessary to complete the work.

SANITARY SEWER POINT REPAIRS

This work shall consist of the removal and replacement of existing sanitary sewer lines at locations shown on the engineering drawings.

Sanitary sewers of sizes 6" through 12" shall be constructed with Polyvinyl Chloride (PVC) pipe having a Standard Dimension Ratio (SDR) of 26. The pipe shall meet the requirements of ASTM D2241. The above pipe and fittings shall be furnished with elastomeric gasket joints conforming to ASTM D3139. Connections to existing mains shall be made with a no-shear flex coupler with two stainless steel bands at a point where the coupling cannot shift.

The Contractor shall carefully excavate the area where the proposed sanitary sewer point repair is scheduled. Excavation shall be performed in accordance with the applicable requirements of Section 20 of the Water and Sewer Main Specifications and the details shown on the engineering drawings. Surface removal items, with the exception of those items listed specifically in the schedule of prices, will not be measured for payment but shall be considered included in the lump sum price for sanitary sewer point repair. Excavation carried beyond or below the line and grades shown on the engineering drawings shall be refilled with CA-7 granular cradle material compacted to the satisfaction of the Engineer at the Contractor's expense. Once the

sanitary sewer is exposed, the Engineer will determine the limits of the repair. If the deterioration is more extensive than is shown on the engineering drawings, the Contractor may be authorized to repair these additional sections of sewer. When, in the opinion of the Engineer, unsuitable soil conditions are encountered which require the removal of unsuitable materials below the depth of granular cradle specified, the Contractor shall replace the material removed with granular cradle in accordance with the special provision SELECT GRANULAR BACKFILL, SPECIAL. Damage to existing sanitary sewers due to the Contractor's noncompliance with this Special Provision will be repaired to the satisfaction of the Engineer at the expense of the Contractor and no additional compensation will be allowed.

Removal of the existing sanitary sewer shall end at either a bell joint or at a location that has been saw cut so as to provide a smooth, even surface that will allow a watertight joint when connected to the new sanitary sewer pipe. All earth and debris shall be removed from the interior of that portion of the existing sewer that is to remain in place. After removal of the existing pipe, the integrity of the pipe shall be checked to insure that it has not been damaged.

The Contractor shall install the sanitary sewer point repair in accordance with the applicable requirements of Section 31 of the Water and Sewer Main Specifications and the details shown on the engineering drawings. No shear flex couplers shall be used to connect the new sanitary sewer pipe with the existing sanitary sewer main. Existing sanitary sewer service connections shall be reconnected in accordance with the details shown on the engineering drawings.

The Contractor shall backfill the sanitary sewer point repair in accordance with the applicable requirements of Section 20 of the Water and Sewer Main Specifications.
Granular cradle (CA-11) and trench backfill (CA-6) will not be measured for payment but shall be included in the price for sanitary sewer point repair.

After the point repairs are complete, the Contractor shall test the existing sanitary sewer segment from manhole to manhole by closed circuit television before acceptance and shall be measured for payment with TELEVISION INSPECTION OF SEWER.

Granular cradle (CA-7) used as replacement for unsuitable foundation materials will be measured for payment with SELECT GRANULAR BACKFILL, SPECIAL.

Sanitary sewer point repairs, complete in place, will be paid for at the contract unit price per foot for SANITARY SEWER REMOVAL AND REPLACEMENT of the diameter specified which price shall be payment in full for all excavation, bedding, trench backfill, and for all sheeting, shoring, dewatering, furnishing and installing all fittings, removal and disposal of all spoil, and making the connections between different pipe materials

and testing. Sewer televising and pavement removal and replacement will be separate pay items.

WATER MAIN AND FITTINGS

This item consists of furnishing all labor, materials, and equipment necessary to perform the work required under this Special Provision and shall be in accordance with the Specifications, the Plans, and as directed by the Engineer. It shall consist of providing, hauling and distributing all pipe, castings, fittings, and accessories and shall also include the excavation of trenches to the required depth; sheeting, bracing and supporting the adjoining ground or structures where necessary; dewatering; provide barricades, guards and warning lights; restrained joints; polyethylene encasement; laying and testing the pipe, castings, fittings, and accessories, dewatering the underlying soil stratum; relocation and/or bracing of power poles and street lights; cleaning and restoration of the work site and maintaining the streets or other surfaces over the trenches as required. The water main shall be laid to meet all vertical and horizontal separation requirements as described in section 41-2.01 of the Standard Specifications for Water and Sewer Construction in Illinois, latest edition, as amended and the separation details provided in the improvement plans.

Polyvinyl Chloride water main shall be C900 DR18 (Pressure Class 235) with elastomeric gasket joints conforming to ASTM F-477. Fittings shall be ductile iron compact fittings with mechanical joints conforming to the requirements of ANSI/AWWA C153/A21.53. All fittings bolts and nuts shall be grade 304 stainless steel with anti-gall coatings.

Contractor should be aware that there are fittings shown on the engineering drawings that require a joint restraint device. This mechanical joint restraint shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and shall be MEGALUG as manufactured by EBAA Iron, Inc. MEGALUG will not be paid for separately but shall be considered included in the cost of water main.

Water main shall be laid with 5.5 foot minimum cover to the proposed finish grade unless shown otherwise on the engineering drawings.

All ductile iron fittings shall be laid as described in these Special Provisions.

All existing water mains and other facilities shall be kept in service during construction, except where permission is granted otherwise by the Owner.

Laying of Pipe

Pipe shall be installed in accordance with the Standard Specifications for Water & Sewer Main construction in Illinois and manufacturer's instructions for installing the type of pipe specified.

Excavation and backfill for water mains shall conform to the typical sections shown in the plans and shall conform to the provisions of Sections 20, 21 and 22 of the Standard Specifications for Water & Sewer Main construction in Illinois.

The trench unless otherwise specified shall have a flat bottom. The pipe shall be laid on 4 inches of bedding stone graded true and even so that the barrel of the pipe will have a bearing for its full length. Bell holes shall be excavated for joints. Any part of the trench excavated below grade shall be corrected with an approved material and thoroughly compacted.

When water is encountered in the trench, it shall be removed during pipe laying and jointing operations. Provisions shall be made to prevent floating of the pipe. Trench water shall not be allowed to enter the pipe at any time. Dewatering, if required, shall be considered included in the cost of the water main installation.

Water Main Restraint – Thrust Blocking

Blocking to prevent movement of lines under pressure at bends, tees, caps, valves, plugs and hydrants shall be solid precast Portland Cement Concrete block having dimensions of 8" x 8" x 16", placed between solid ground and the fittings, and shall be anchored in such a manner that pipe and fitting joints will be accessible for repairs. The contractor shall provide a polyethylene cover over the pipe and/or fitting joints prior to installation of the concrete.

The cost of thrust blocking is considered included in the cost of the water main installation.

Water Main Protection

This work shall be paid for at the contract unit price per FOOT (FT) for STORM SEWER (WATER MAIN REQUIREMENTS) of the diameter and type specified, and SANITARY SEWER, SPECIAL which shall be payment in full for all labor, equipment and material required to install the protective pipe. At locations where water main crosses an existing sanitary line, the sanitary line shall be replaced with PVC D2241 SDR 26 pipe at lengths to follow the Standard Specifications for Water & Sewer Main construction in Illinois, current edition. At locations where existing storm conflicts with the proposed water main, the storm pipe shall be replaced with PVC D2241 SDR 26 at lengths to follow the Standard Specifications for Water & Sewer Main construction in Illinois, current edition.

Contamination Preventive Measures During Construction

Soil, organic matter, and other heavy material typically contain bacteria and can prevent even high concentrations of chlorine from contacting and killing the organisms. These bacteria can cause failure of bacteriological sampling. Preventing these types of materials from entering water main pipe either during or before installation is critical. Preventive measures are described in detail in AWWA Standard C651-14 Section 4.8.

At a minimum, the following preventive measures shall be followed during water main pipe installation:

Keep pipe clean and dry. The interiors of pipes, fittings, and valves shall be protected from contamination. All openings in the pipeline shall be closed watertight or with rodent-proof plugs when pipe laying is stopped at the close of the day's activities or for other reasons.

Joints. Joints of all pipe in the trench shall be completed before work is stopped.
Cleaning and swabbing. If dirt or other foreign material enters the pipe, it shall be removed and the interior of the pipe surface swabbed with a 1 to 5% sodium hypochlorite (NaOCl) disinfecting solution
Installed piping systems shall be temporarily plugged at the end of each day's work. Plugging shall be adequate to prevent entry of small animals or debris into the pipe.

Tracer Wire and Detectable Utility Warning Tape

Tracer wire shall be TRACE-SAFE Water Blocker Tracer Wire with TRACE-SAFE Connectors as manufactured by NEPTCO, Pawtucket, RI (www.trace-safe.com). Two tracer wires shall be strapped to the crown of the water main along its entire length (including along water service lines, fire hydrants leads, and fire hydrants barrels) with nylon zip ties spaced at no greater than four feet (4') on center. Tracer wires shall be spliced using the TRACE-SAFE End to End Butt Splice Connector. Tracer wires shall be grounded at the end of all main line runs by connecting the tracer wires to an eight-foot (8') long by 5/8 inch diameter copper bonded grounding rod. Tracer wires shall be extended from the water main to all buffalo boxes and back to the water main using TRACE-SAFE Main to Lateral connectors; the tracer wire shall be double spliced (two connecting wires) and connected to the water service line within two-feet (2') of the b-box using a stainless steel hose clamp.; connection to be wrapped with moisture blocking electrical tape. Both tracer wires shall extend from the water main to lower flange on all fire hydrants and be connected with TRACE-SAFE Fire Hydrant Connectors With Isolation Wing Nuts. Inside all valve vaults, a tracer wires shall run from both the tracer wires at the bottom of the valve vault to the top of the valve vault; the wire shall be terminated with a TRACE-SAFE connecting block and secured to the top of the valve vault cone with a Tapcon bolt and stainless steel washer. Blue Detectable Utility Tape (2-inch wide) Labeled "Buried Water Line" shall be installed over all water main and water service lines at a bury depth of 18-inches.

Upon completion of the pressure test, a leakage test shall be conducted. The duration of the test shall be a minimum of one hour at a nominal pressure of 150 pounds per square inch (gauge). The allowable leakage shall be determined by the formula:

$$L = \frac{SD\sqrt{P}}{133{,}200}$$

Where: L= Allowable leakage in gallons per hour
D = Nominal Diameter of pipe in inches
P = Average test pressure in pounds per square inch (gauge)
S = Length of pipe line tested in feet

Leakage is defined as the quantity of water to be supplied in the section under test which is necessary to maintain the test pressure after the pipe has been filled with water and the air expelled.

This work will be measured in place in feet. The length measured will include stops, fittings, and valves.

Basis of Payment

This work shall be paid for at the contract unit price per foot for WATER MAIN, of the size and type specified, which price shall include providing and installing the pipe, all equipment, labor, tracer wire, bedding stone and other materials, (not listed for payment separately). Trench backfill will be paid for at the contract unit price per cubic yard of TRENCH BACKFILL.

Payment will be made at the contract unit price per foot for WATER MAIN, of the material, size and type specified, which shall include the cost of all excavation, testing, and all other labor, materials, and equipment necessary to complete all the work as described above and as indicated in the engineering drawings. Any existing valve boxes that are to be abandoned due to the installation of new water main shall have the box extensions removed and the surrounding area patched or landscaped as the case may be. All costs incurred to do this work shall be included in the price for installing the new water main.

Any utility undercuts needed, as directed by the Engineer, shall be paid for as SELECT GRANULAR BACKFILL, SPECIAL with CA-11 as stated in these provisions.

POLYETHYLENE ENCASEMENT

All ductile iron or cast iron pipe, fittings, valves, and hydrants shall receive a 8-mil polyethylene encasement in accordance with AWWA C105. Encasement shall be U.S. Pipe V-Bio Enhanced Polywrap.

The encasement material shall be an eight (8) mil thick polyethylene tube designed for water main application and in the size recommended by the manufacturer for the size of force main or water main installed. The casing shall be lapped 12 inches and held in place with polyethylene adhesive tape. Repair any rips, punctures, or other damage to the polyethylene with tape or cutting open a short length of tube, wrapping it around the pipe and securing with tape.

Wrap valves, tees, crosses, and special fittings with a flat sheet obtained by splitting open a length of polyethylene tube. Pass the sheet under the valve of fitting and bringing it up around the body. Join the seams by bringing the edges together, folding over twice and securing in place with tape. The sheet shall be adequate to provide a 12-inch lap with the tubing.
The backfill material shall be free of rocks and debris which may damage the polyethylene.

Polyethylene encasement will not be paid for separately but shall be included in the cost of the water main DUCTILE IRON WATER MAIN FITTINGS.

WATER VALVES

This work shall be in accordance with Section 561 of the Standard Specifications, SSWSCI, and the Village Specifications in so far as applicable and the following provisions. This work shall consist of furnishing and installing gate valves, of the specified size.

The gate valves shall be suitable for ordinary water works service, intended to be installed in a normal position on buried pipe lines for water distribution systems.

Valves shall be non-rising stem and shall close by turning clockwise. All valves shall conform to the latest revision of AWWA Specification C500 with a rated working pressure of 250 psi. All gate valves shall be Mueller A2361 or American Flow Control Series 2500 resilient wedge, fused epoxy coated with stainless steel bonnet bolts.

Gate Valves shall be installed with Wedge Action Retainer Glands. Main line valves shall be furnished with mechanical joint connections and restrained with MEGALUG.

Valves twelve inch (12") and smaller shall be bubble tight at 250 psi water working pressure. All gate valves shall have a non-rising stem, shall have a standard 2" square operating nut and shall open in a counter clockwise direction.

Each valve shall have maker's name, pressure rating and year in which manufactured cast on the body. Prior to shipment from the factory, each valve shall be tested by hydrostatic pressure equal to twice the specified working pressure.

Basis of Payment.

This work shall be paid for at the contract unit price each for WATER VALVES, of the size specified, which price shall include providing and installing the valve, retaining glands, fittings, and all materials, labor, and equipment for a complete installation.

VALVE BOX

Valve boxes shall be Tyler 664- S, 3-piece, screw type with 5-1/4" shaft and no-tilt drop cover marked with the legend "WATER" and installed with a rubber stabilizer manufactured by Adaptor Inc.

Basis of Payment

Valve boxes shall be paid for at the contract unit price bid per EACH for VALVE BOX of the diameter and type specified. Valve boxes specified for fire hydrants shall be included in the FIRE HYDRANT ASSEMBLY COMPLETE pay item.

VALVE BOX FRAMES TO BE ADJUSTED WITH NEW FRAMES

This work shall be performed according to the Special Provisions Structure Adjustments and Valve Box.

Basis of Payment

This work shall be paid for at the contract unit price bid per EACH for VALVE BOX FRAMES TO BE ADJUSTED WITH NEW FRAMES, which price shall include providing and installing the new frame and cover and all materials, labor, and equipment for a complete installation and adjustment.

VALVE VAULTS

Valve Vaults shall be 60" in diameter for all valves. Valve Vaults shall be reinforced concrete in accordance with ASTM C478 and C443 and constructed in accordance with the plans and details and shall include all excavation, testing, frame and cover, granular trench backfill, and all other appurtenances.

The manhole frame and lid shall be manufactured by East Jordan Iron Works (EJIW) catalog number 1022-2 with heavy duty solid cover (minimum assembled weight of 300lbs.). 'VILLAGE OF GLEN ELLYN' and the word 'WATER' shall be cast in the cover in 2-inch raised letters.

Basis of Payment

Valve vaults will be paid for at the contract unit price bid per EACH for VALVE VAULTS of the type, diameter, frame, and lid of vault specified.

DUCTILE IRON WATER MAIN FITTINGS

Water main fittings shall be ductile iron, cement lined, with mechanical joints rated at a minimum of 250 psi. All bends shall have restrained joints using MEGALUG style glands. In addition to the MEGALUG style retaining glands to be used at all mechanical joint fittings, the gasket at each joint one pipe length beyond the fitting shall be a Field Lok gasket.

All fittings bolts and nuts shall be grade-304 stainless steel with anti-gall coatings.
Fittings shall be covered with polyethylene encasement and shall be included in the cost of the DUCTILE IRON WATER MAIN FITTINGS.

The cost of furnishing and installing retainer glands and Field Lok gaskets is to be included in the cost of DUCTILE IRON WATER MAIN FITTINGS.

Basis of Payment

This work will be paid for at the contract price per pound for DUCTILE IRON WATER MAIN FITTINGS which includes all material, polyethylene encasement and labor necessary for installation. Any fittings beyond those indicated on the engineering plans required to install the water main in accordance with the engineering plans are considered included in the cost of the water main.

All vertical water main adjustments shall be accomplished by deflection, not bends in the water main. However, if fittings are necessary as deemed by the Engineer to lower the water main to avoid conflicts with other existing utilities and provide for water main protection, then they will be paid at the contract unit price per pound for Ductile Iron Water Main Fittings. Weight of fittings on the Bid Schedule does not include weight of mechanical joint accessories.

Mechanical Joint Accessories, consisting of, but not limited to, gaskets, glands, retainer glands and bolts, are considered included in the cost of DUCTILE IRON WATER MAIN FITTINGS. Weight of fittings on the Bid Schedule does not include weight of accessories.

CONNECTIONS TO EXISTING WATER MAIN

The Contractor shall make connections to the existing water mains at locations shown on the drawings, and in the manner detailed.

Where the connection of new work and old require interruption of services and notification of customers affected, the superintendent of the Utility (Village), the Engineer and the Contractor shall mutually agree upon a date and time for connections which will allow ample time to assemble labor and materials, and to notify all customers affected. Customers shall be notified at least 48 hours prior to being taken out of service.

Valves on existing mains shall not be operated by the Contractor (unless otherwise authorized by the Village), and will be closed and opened only by the employees of the Village's Water Department.

The Contractor shall expose the water main to be connected and shall confirm the size and type of piping present. The Contractor shall obtain the necessary materials required to make a proper connection. The Contractor shall not proceed until he has all the required materials on site. The Contractor shall limit the time for interconnections to four (4) hours. In no case, shall a customer(s) be out of service overnight.

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

No pressure connections will be permitted.

Basis of Payment

This work will be paid for at the contract unit price per EACH for CONNECTION TO EXISTING WATER MAIN for size specified, which price shall include all equipment, labor, connecting pipe, stone bedding and other materials, (not listed for payment separately), required to make proper connections of the existing water mains to the proposed water mains. Any water main required to complete the connection on the existing water main (adjacent to the tee or sleeve) shall be considered included in the

cost of the CONNECTION TO EXISTING WATER MAIN of the size specified and will not be measured for payment separately. Dewatering, if required, shall be considered included in the cost of CONNECTION TO EXISTING WATER MAIN.

DUCTILE IRON FITTINGS required for these connections will be paid for separately at their respective contract unit prices. Only dual purpose sleeves with Duo gaskets for Oversized Sand Cast will be permitted. No OMNI clamps will be permitted.

Trench backfill will be paid for at the contract unit price per CUBIC YARD of TRENCH BACKFILL.

Plugging the portions of existing mains to be abandoned will be paid for at the contract unit price per EACH for CUT AND CAP EXISTING WATER MAIN, of the size specified in the plans, which shall be payment in full for all labor, equipment, and material necessary to perform this work in accordance with the plans, specifications, and as directed by the Engineer in the field.

CUT AND CAP EXISTING WATER MAIN

The Contractor shall disconnect and abandon the existing water main at locations shown on the drawings, and in the manner detailed.

Disconnecting and abandoning the existing water main shall only occur after all water services have been transferred to the proposed water main.

Disconnecting the existing water main will require interruption of services. The superintendent of the Utility (Village), the Engineer and the Contractor shall mutually agree upon a date and time for disconnections which will allow ample time to assemble labor and materials, and to notify all customers affected. Customers shall be notified at least 48 hours prior to being taken out of service.

The Contractor shall not operate valves on existing mains (unless otherwise authorized by the Village), and will be closed and opened only by the employees of the Village's Water Department.

The Contractor shall expose the water main to be disconnected and shall confirm the size and type of piping present. The Contractor shall obtain the necessary materials required to make a proper disconnection. The Contractor shall not proceed until he has all the required materials on site. The Contractor shall limit the time for disconnections to four (4) hours. In no case, shall a customer(s) be out of service overnight.

The Contractor shall furnish a 1” whip with roundway at all dead end cap locations where water service is live. The whip will be used to flush air from the line and turn over water as necessary.

This work will be paid for at the contract unit price per EACH for CUT AND CAP EXISTING WATER MAIN, of the size specified, which price shall include all equipment, labor, disposal of abandoned pipe, stone bedding, connection pipe, 1” whip material and installation, and other materials (not listed for payment separately) required to properly disconnect existing water mains.

Thrust blocking required for these disconnections will be considered included in the cost of the CUT AND CAP EXISTING WATER MAIN pay item. A mechanical joint cap will be required at the end of the abandoned water main.

Ductile Iron Fittings required for these disconnections will be paid for at the contract unit price per pound for DUCTILE IRON FITTINGS. Trench backfill will be paid for at the contract unit price per cubic yard of TRENCH BACKFILL.

FIRE HYDRANT ASSEMBLY COMPLETE

Hydrants shall be manufactured to the latest and best design conforming to the current AWWA Specifications C-502, “Standard for Dry Barrel Fire Hydrants” and shall be of the break away style traffic design.

Hydrants shall be easy and economical to install and maintain, shall incorporate no parts requiring field adjustment, and shall place nozzle at least eighteen inches (18") above the hydrant ground line to fully comply with the National Fire Protection Association, Fire Protection Handbook, 13th Edition. Hydrants shall be equipped with automatic drain.

Fire hydrants shall be painted yellow at the factory and not repainted in the field.
All contractors/suppliers shall include (A) a detailed drawing to include a parts list indicating the material construction and applicable ASTM Standards for each part or item; and (B) flow data for the proposed hydrant if requested.

Fire Hydrants to be supplied shall be Mueller Super Centurion 250, A-423 with two (2), two and one half inch (2 1/2") NST (National Standard Threads) hose nozzles and one four and one half inch (4 1/2") NST Pumper Nozzle. The main valve opening size shall be five and one quarter inch (5 1/4"). The inlet shall be six inch (6") mechanical joint

(complete with accessories). Hydrants shall open by turning left (counter clockwise). Hydrants shall be painted red.

Shop drawings of the fire hydrant shall be submitted for review.

Hydrants shall be installed in accordance with applicable provisions of Section 45 of the Standard Specification.

All 6" mechanical joint auxiliary gate valves shall be constructed with a Tyler 664-S, 3-piece, screw type valve box with 5-1/4" shaft and no-tilt drop. Lids to be marked "WATER". The auxiliary valve shall be attached to the hydrant with Swivel Anchor Pipe & Couplings (Fab Pipe, Inc). Auxiliary valve can be connected via flange by mechanical joint and directly attached to the hydrant shoe flange.

Fire hydrant installations shall require the use of a hydrant tee on the main line. Mechanical joint hydrant tee shall be ductile iron class 350 and shall be produced in accordance with ANSI/AWWA A21.53/C153 and ANSI/AWWA A21.11/C111 for joints and ANSI/AWWA A21.4/C104 for cement lining sizes 3" through 24". Hydrant tee mechanical joints nuts and bolts shall be ductile iron, high strength, low alloy steel per ANSI/AWWA A21.11/C111.

Basis of Payment

This work shall be paid for at the contract unit price each for FIRE HYDRANT ASSEMBLY COMPLETE, which price shall include labor and material necessary to install the hydrant, the valve, valve box, the connection pipes, backfill material and fabric, and thrust block as detailed on the plans. The 6" Tee fitting or reducer required for these installations will be paid for at the contract unit price per pound for DUCTILE IRON FITTINGS.

FIRE HYDRANTS TO BE REMOVED

This work shall consist of removing and if necessary disposing of existing fire hydrants, auxiliary valves, valve boxes, including all required excavation and back fill. The Contractor shall keep existing hydrants in service until the proposed water main improvements have passed all required testing and have been placed into service.

A 6" cap shall be installed on the existing water main where the hydrant was removed.
The Village reserves the right to salvage any hydrant and/or assembly. The Contractor shall notify the Public Works Department to request an inspection of the hydrants for

salvage. The Contractor is responsible for disposal offsite at no additional cost if removed hydrants are deemed not appropriate for salvage.

Basis of Payment

This work shall be paid for at the contract unit price per EACH for FIRE HYDRANTS TO BE REMOVED. Ductile Iron Fittings required for these disconnections will be paid for at the contract unit price per pound for DUCTILE IRON FITTINGS. Trench backfill will be paid for at the contract unit price per cubic yard of TRENCH BACKFILL.

HYDROSTATIC TESTS AND DISINFECTION OF THE WATER MAIN

The Contractor shall perform Hydrostatic Tests in accordance with Division IV, Section 41 of the Technical Specifications and applicable provisions of AWWA C-600 and C-603. The water main shall be pressure tested at 150 psi.

The test pressure shall not drop more than 2 psi for the duration of the test. Allowable leakage shall be set forth in Section 41 of the Technical Specifications. Duration of the test shall be two (2) hours minimum. The gauge should be of good quality and condition, and be fluid filled. The gauge should have large enough range for the pressure being tested and should be capable of reading a minimum pressure of one (1) psi. The testing length shall be limited to 1000 foot. If more than 1000 foot of water main is tested, the allowable leakage will be based upon 1000 foot.

Upon completion of the newly laid water main, the water main shall be disinfected in accordance with the American Water Works Association, Procedure Destination, AWWA C-651.

Upon completion of the newly installed water main the new water main shall be flushed by the Contractor, prior to chlorination, at its extremities at a rate of not less than 2.5 fps, to remove any foreign matter that might be in the main. Following chlorination, all treated water shall be thoroughly flushed from the newly laid water main at its extremities until the replacement water throughout its length shall equal in quality, both chemically and bacteriologically, the water to be served to the public by the water system. This work shall be in accordance with AWWA Specification C651 as well as State and Municipal Specifications and shall be accomplished in a manner acceptable to the State Board of Health.

The contractor shall demonstrate how adequate flushing velocities will be obtained for all pipe segments. As required, temporary flushing hydrants shall be installed to achieve adequate flushing of mains at no additional cost.

Only first-day samples in the two-sample testing protocol may be taken Monday through Wednesday upon adequate notice from the Contractor that the water main is ready for sampling and there are no holidays during the week. The Contractor will not be charged for the initial series of water samples for any water main segment test. If the water main segment fails to pass the second disinfection test, the Contractor will be charged a water sample testing fee according to the following schedule, such fees to be deducted from monies owned to the Contractor.

Test Series Number	Water Sample Testing Fee Charged to Contractor
1	$0
2	lab costs only
3	$2,500 plus lab costs
4	$5,000 plus lab costs
5 and subsequent tests	$10,000 + $5,000 plus lab costs for each test beyond 5

Corporation stop used for flushing shall be included in the price of the water main. Type of corporation stop shall be as specified by the Glen Ellyn Public Works Department. All mains will be DECHLORINATED at the furthest extremity following chlorination and prior to flushing and sampling.

Basis of Payment

This work will not be paid for separately, but shall be included with the cost of water main installation.

VALVE VAULTS TO BE ABANDONED

This work shall be in accordance with Section 605 of the Standard Specifications insofar as applicable, except as modified herein.

Abandoning the valve vault shall include removal of the casting, lid, and conical section of the structure. The remaining structure shall be filled with CLSM.

For valve vaults located outside the limits of the pavement, the remaining void shall be filled with earthen backfill. For valve vaults located inside the pavement limits, the remaining void shall be filled with trench backfill up to the proposed pavement section.

Basis of Payment

This work, as herein specified, will be paid for at the contract unit price per each for VALVE VAULTS TO BE ABANDONED, which price shall include all material, equipment, and labor necessary to complete the work.

WATER VALVE BOXES TO BE ABANDONED

This item shall consist of the removal of the existing valve boxes as shown on the plans. Removal shall include the excavation and physical removal of the valve box.

For valve boxes located outside the limits of the bituminous roadway, the removal shall include the excavation and physical removal of the valve box and backfilling the void left by the valve box with earthen backfill.

Trench backfill will be paid for at the contract unit price per cubic yard of TRENCH BACKFILL.

Basis of Payment

Valve box removal shall be paid for at the contract unit price per EACH as WATER VALVE BOXES TO BE ABANDONED which includes all necessary labor, tools, equipment, and materials necessary to remove existing valve boxes.

ABANDON EXISTING WATER MAIN, FILL WITH CLSM

Water main shall not be abandoned until all new water main is in place and operational, and water service is restored to all previously associated residents. Where the plans call for abandonment of water main, the main shall be physically separated from the functioning water main. Confirmation shall be made that all locations where the water main was disconnected is capped using mechanical devices completely plugging the main. Watertight gaskets are to be used on all caps and plugs. The abandoned main shall be drained of all water prior to filling the pipe with CLSM.

Water main to be abandoned within IDOT right-of-way and at the intersection of Park Boulevard and Fairview Avenue shall be filled with flowable material or Controlled Low-Strength Materiable (CLSM) prior to capping and shall be in accordance with all applicable specifications in the IDOT Standard Specifications for Road and Bridge Construction, current edition.

Basis of Payment

This work shall be paid at the contract unit price per FOOT for ABANDON EXISTING WATER MAIN, FILL WITH CLSM, regardless of the diameter of the pipe being abandoned.

INSTALL WATER SERVICE, COMPLETE

The water service pipe, curb stop and curb box, existing curb box removal, joint materials and other required fittings, labor, materials, and installation necessary to connect the existing water services to the newly installed water main are considered as part of this item.

Water service line shall be copper, Type K, soft temper for underground service, conforming to the requirements of ASTM Standards B88 and B251. The pipe shall be marked with the manufacturer's name or trade mark and a mark indicative of the type of pipe. The outside diameter of the pipe shall conform to ASTM Standard B251, Table 2. Each water service shall extend from the new water main to the existing curb stop or right-of-way line, at the direction of the Engineer.

Corporation stops and curb stops shall be fabricated of brass and provided with outlets suitable for copper connection in accordance with the requirements of AWWA Standard C-800. Curb stops shall be of the round-way type. Fittings for water service line shall be copper and of the compression type.

Domestic water service curb boxes shall be cast iron, screw-type, with the base set over the curb stop and of such construction that it can be extended in length to fit the particular location with 18" of adjustment left. The cover of the domestic water service box shall be marked "WATER".

Water service connections shall be installed in accordance with the requirements of Sections 41-2.12 and 41-2.13 of the Water and Sewer Specifications and the details included in the engineering drawings. The proposed water main shall be tapped at an angle of 45 degrees with the vertical, and the stop turned so that the T-handle is on top. The water service line shall extend horizontally at right angles with the water main to the proposed curb stop and/or point of connection. Water service re-connections shall be at the same location as they are at present or as directed by the Engineer. The copper tubing shall be one continuous length (no coupling of the new copper tubing will be allowed) laid in the trench sufficiently weaving to allow not less than one (1) foot of extra length between the corporation and curb stops. Water service lines shall be directionally drilled as shown on the project engineering drawings; open cuts through the pavement

will be allowed at all other locations. A new domestic water service box shall be set over the proposed curb stop at the location shown on the engineering drawings or as directed by the Engineer. The new copper water service line shall be flushed to remove all debris before it is coupled to the existing service line approximately eighteen inches (18") beyond the new curb stop. Existing curb stops and water service boxes shall be removed and legally disposed off-site after the new water service connection is completed.

The Contractor shall minimize any interruption of service to customers in order to install new water service connections. A minimum of 2 hours notice shall be made to the Engineer and customer before any water shutoff occurs. No shutoff may take place until the Contractor has contacted a responsible individual at each location.

Village specifications for water service lines 2-inches or less:

Item		Specification		
Service Line and Meter Size		For potable usage, per Illinois Plumbing Code (Appendix A - Table N); One and one half Inch (1 1/2") minimum diameter pipe size		
Saddle		**REQUIRED** For PVC pipe (and as required or specified for ductile/cast iron pipe): Smith-Blair 372 Series "TaperSeal" stainless steel service saddle, double bolt, CC thread. With permission of the Utilities Division **for DIP only**, Mueller BR2B Series, bronze double strap with AWWA taper thread (CC)		
Pipe Material		Type K Copper		
Fittings – Must meet No-Lead Brass Requirement and have "NL" marking		Mueller	Ford	McDonald
Corporation Stop		Corporation stop shall be Mueller B-25000, with Ford L04-665-NL(90°)/LA04-665-NL(45°) or A.Y. McDonald 74776-ST-66(90°)/74750-ST-66(45°) flare x compression mechanical bend that is securely blocked or Mueller B-25008, 1 to 2 inches in size.		
Curb Stop (Quarter Turn Check and Minneapolis Top Thread)	1 inch	B-25155	B44-444M	6100T or –22 6100WT or –22
	1-1/4 inch	H-10287 + two H-15428	B44-555M	6105+(4753T or –22, 6104-55, 6110-55)

	1-1/2 inch	B-25155	B44-666M	6100-33, 6104-33
	2 inch	B-25155	B44-777M	6100-44, 6104-44
Curb Box (Minneapolis Pattern 1-1/2" diameter; cast iron top and pentagon plug)	5.5' bury	H-10302	EM2-55-67	5622, 5623
	6' bury	H-10302	EM2-60-67	5622, 5623
	6.5' bury	H-10302	EM2-65-67	5610, 5611
Unions	Use Appropriate Mueller, Ford or McDonald Couplings			
Fittings that are in vaults should be flare connections.				

Basis of Payment

All work necessary to complete the work item as described and shown in the details shall be paid for at the contract unit price per EACH for INSTALL WATER SERVICE, COMPLETE. All required trench backfill will be paid at the contract price per CUBIC YARD for TRENCH BACKFILL.

The tap and corporation stop installation will be paid for at the contract price per EACH for WATER SERVICE CONNECTION, of the size specified.

Water service line of the specified diameter for a length up to the existing b-box will not be measured for payment but shall be part of the work required for the above INSTALL WATER SERVICE COMPLETE. At locations determined by the Engineer to meet field conditions, the Contractor will provide and install an additional length of water service line. This additional service pipe will be paid per foot for WATER SERVICE LINE of the size indicated.

Notification of Property Owners

It is the responsibility of the Contractor to contact the residents prior to a temporary loss of water or access to their household, in writing, a minimum of 24 hours but not more than 48 hours, prior to the commencement of these activities. The morning of the work, the Contractor will again be required to notify the Engineer verbally. The notice given out by the Contractor should provide information regarding the anticipated date that full access or water will be restored. Coordination between activities should allow for work to be done in a timely matter to permit access to the roadway.

WATER MAIN REMOVAL

This work shall be in accordance with Section 561 of the Standard Specifications insofar as applicable and the following provisions. Work consists of the removal of existing water main at locations shown on the plan. The water main removed shall not be salvaged.

Trench backfill will not be paid for separately but shall be included in the cost of the item.

Basis of Payment. This work shall be paid for at the contract unit price per foot for WATER MAIN REMOVAL, of the diameter specified, which included excavation, removing and disposal of the existing pipe, installation trench backfill and all material, labor and equipment required for complete removal.

VALVE BOXES TO BE REMOVED

This work shall be in accordance with Section 565 of the Standard Specifications insofar as applicable and the following provisions. The work shall consist of all work necessary for the full depth removal of the valve box and disposal of the valve box. Disposal shall be included in the cost of the removal.

Basis of Payment. This work shall be paid for at the contract unit price per each for VALVE BOXES TO BE REMOVED which includes all material, labor and equipment required for complete removal.

VALVE VAULTS TO BE REMOVED

This work shall be in accordance with Section 565 of the Standard Specifications insofar as applicable and the following provisions. The work shall consist of all work necessary for the full depth removal of the valve vault and disposal of the valve vault. Disposal shall be included in the cost of the removal.

Basis of Payment. This work shall be paid for at the contract unit price per each for VALVE VAULTS TO BE REMOVED which includes all material, labor and equipment required for complete removal.

MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID

This work shall be performed in accordance with Section 602 of the Standard Specifications, the SSWSCI, and City Specifications insofar as applicable and the following provision. This work shall include furnishing and installing manhole, frame and

lid, trench backfill, dewatering, and backfill material as detailed on the plans and disposal of all excess materials.

The manhole frame and lid shall be East Jordan Iron Works (ELIW) catalog number 1022-2 with heavy duty solid cover (minimum assembled weight of 300lbs). "VILLAGE OF GLEN ELLYN" and the word "SANITARY" Frames and lids shall be Type 1 frame and grate and the word "SANITARY" shall be cast in the cover in 2-in raised letters. The lid shall be a self-sealing solid lid with watertight gasket and concealed pickhole.

All sanitary sewer manholes shall be set in butyl rope joint sealant, including all component parts, bottoms, barrels, adjusting rings and castings. The outside joints shall be provided with a four (4) inch wide strip of butyl-resin sealant completely around each joint with vertical lap of one (1) inch and horizontal lap of six (6) inches.

Sanitary manholes shall have a poured concrete bench. Cast iron steps shall be installed in manholes.

External chimney seals shall be installed on all sanitary manholes.

Sanitary sewer manholes shall have openings for the pipe connections cast into the wall of the structure. Rubber boots with stainless steel bands / retainers shall be per ASTM C-923.

The Contractor shall perform vacuum testing of the manholes in accordance with the SSWSCI.

No ground water will be allowed to enter the sanitary sewer or manholes during or after construction. When water is encountered in the excavation for the manhole, it shall be removed. Provisions shall be made to prevent floating of the structure. Dewatering, if required, shall be included in the cost of this item.

Basis of Payment. This work shall be paid for at the contract unit price per each for MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID, which price shall include providing and installing the manhole, frame and lid, chimney seal, cast iron steps, rubber boots, trench backfill, dewatering, and backfill material as detailed on the plans, and all manhole vacuum testing, materials, labor, and equipment for a complete installation.

SANITARY SEWER 8"

This work shall be in accordance with the Standard Specifications, SSWSCI, and the City Specifications insofar as applicable and the following provisions.

All sanitary sewer shall be PVC SDR 26 meeting ASTM D-2241 and joints shall meet the requirements of ASTM D-3139. (This is a pressure rated pipe meeting the requirements of water main quality pipe.)

Excavation and backfill for sanitary sewer shall conform to the trench details shown in the plans and the SSWSCI.

The Contractor shall perform air exfiltration and deflection testing of the sanitary sewer in accordance with SSWSCI. In addition, all sanitary sewers shall be televised. The Contractor shall televise the sanitary sewer in conformance with the SSWSCI. Two (2) copies of the report shall be submitted to the ENGINEER upon completion, and these reports shall include DVD's of the televising. The reports shall also be bound with a cover page indicating the title of the project. In addition, a table of contents should be included that lists each run and indicates on which DVD the run is located. If any defects are found during the air exfiltration testing, deflection testing, and/or televising of the sewer, the Contractor shall make all repairs at no cost to the City.

When water is encountered in the trench, it shall be removed during pipe laying and jointing operations. Provisions shall be made to prevent floating of the pipe. Trench water shall not be allowed to enter the pipe at any time. Dewatering, if required, shall be included in the cost of this item.

Trench backfill will be paid for separately.

Basis of Payment. All sanitary sewer work shall be paid for at the contract unit price per foot for SANITARY SEWER 8", which price shall include removal and disposal of excavated material, air testing, mandrel testing, televising of the sanitary sewers, and all materials, labor, and equipment for a complete installation.

HOT-MIX ASPHALT DRIVEWAY PAVEMENT REMOVAL

This work shall be in accordance with Sections 202 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of sawcutting and removing existing hot-mix asphalt driveways to the limits shown on the plans and as directed by the Engineer.

This work shall be paid for at the Contract unit price per square yard for HOT-MIX ASPHALT DRIVEWAY PAVEMENT REMOVAL. This pay item shall include the sawcutting, excavation and removal of the existing driveway and any other excavation

required to prepare for the placement of the proposed driveway and the disposal of any excavated material.

HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6”

This work shall be in accordance with Sections 406 of the Standard Specifications insofar as applicable and the following provisions.

This work shall consist of constructing hot-mix asphalt driveways according to the detail shown in the plans and shall include aggregate base.

This work shall be paid for at the Contract unit price per square yard for HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6”, in accordance with section 406 of the Standard Specifications for which price shall include all materials, labor and equipment necessary to construct the driveway pavement according to the detail included in the plans.

REMOVE AND RE-ERECT EXISTING LIGHTING UNIT

This work shall be in accordance with Section 844 of the Standard Specifications insofar as applicable and the following provisions.

This item consists of removing existing lighting units and re-erecting the units at the locations shown on the plan and as directed by the Engineer.

The proposed course gravel setting pad and the limestone screenings for backfill as shown in the plans will not be paid for separately but will be included in the concrete unit price per each for REMOVE AND RE-ERECT EXISTING LIGHTING UNIT.

If a lighting unit is being relocated within 3’ of the original lighting unit, the hole in the ground created when removing the lighting unit shall be backfilled with limestone screenings also.

This work will be paid for at the contract unit price per each for **REMOVE AND RE-ERECT EXISTING LIGHTING UNIT**, which price shall include all wiring, cables, conduit, cable splicing, fuses, setting pad, backfill material, and all material, labor and equipment necessary for a complete installation.

REMOVAL OF POLE FOUNDATION

This work shall be in accordance with Section 842 of the Standard Specifications insofar as applicable and the following provisions.

This item consists of removing existing concrete pole foundations as shown on the plan and as directed by the Engineer. The removal of the pole foundation includes removal

of any light unit base that remains on the foundation after removal of the lighting unit, as well as electrical wiring, cables, and conduit that may exist in the base.

This work will be paid for at the contract unit price per each for **REMOVAL OF POLE FOUNDATION**, which price shall include removal of all wiring, cables, conduit, concrete foundation, light unit base, and all material, labor and equipment necessary for a complete removal.

AVAILABLE REPORTS

☐ 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)

☒ Preliminary Environmental Site Assessment (PESA)

☒ Soils/Geotechnical Report

☐ Boring Logs

☐ Pavement Cores

☐ Location Drainage Study (LDS)

☐ Hydraulic Report

☐ Noise Analysis

☒ Other: LPC-663 Documentation .

Those seeking these reports should request access from:

Tim Weidner
Engineering Enterprises, Inc. (on behalf of Village of Glen Ellyn)
52 Wheeler Road
Sugar Grove, IL 60554
630-466-6700
Hours: 8:00 AM to 5:00 PM
tweidner@eeiweb.com

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)

Effective: August 1, 2012 Revised: February 1, 2014

In addition to the Contractor's equal employment opportunity affirmative action efforts undertaken as elsewhere required by this Contract, the Contractor is encouraged to participate in the incentive program to provide additional on-the-job training to certified graduates of IDOT funded pre-apprenticeship training programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at $15.00 per hour for training given a certified TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under 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 TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this Special Provision.

METHOD OF MEASUREMENT: The unit of measurement is in hours.

BASIS OF PAYMENT: This work will be paid for at the contract unit price of $15.00 per hour for certified TRAINEES TRAINING PROGRAM GRADUATE. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeyworker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is 1 . During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision $15.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.

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 Glen Ellyn

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

Illinois Department of Transportation

Storm Water Pollution Prevention Plan

Route	Marked Route	Section
FAU 2580 & FAU 2581	Park Boulevard and Main Street	16-00081-00-PV
Project Number	**County**	**Contract Number**
9V1A(115)	DuPage	61E35

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issues by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name	Title	Agency
Rich Daubert, P.E.	Professional Engineer	Village of Glen Ellyn
Signature		**Date**
		10/10/2017

I. Site Description

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

Project is located in the Village of Glen Ellyn, on Park Boulevard from IL-38 to the Union Pacific Railroad and on Main Street from IL-38 to Fairview Avenue. The project is located at Latitude 41.865 & Longitude 88.061.

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

Park Boulevard will be reconstructed from IL-38 to north of Fairview Avenue. The reconstruction will consist of staged construction with complete removal of the existing pavement and curb and gutter and spot repairs to the existing sidewalk. Water Main and Storm Sewer will also reconstructed in this location. In other areas, construction will generally consist of resurfacing the existing pavement and spot repairs of existing curb & gutter and sidewalk.

C. Provide the estimated duration of this project:

7 months

D. The total area of the construction site is estimated to be 12.7 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 3.1 acres.

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

The weighted average of the runoff coefficient is 0.80.

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

Soils found within the project boundaries are 854B "Markham-Ashkum-Beecher complex" and 805B "Orthents, clayey, undulating" having slopes of 1 to 6 percent.

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

There are no wetlands within the project limits.

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

There are no known potentially erosive areas associated with this project.

I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g. steepness of slopes, length of scopes, etc.):

J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent off site sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

K. Identify who owns the drainage system (municipality or agency) this project will drain into:

Village of Glen Ellyn

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

Village of Glen Ellyn

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

Storm sewers discharge to the East Branch of the DuPage River or to a series of hydraulically connected ponds in at the Village Links of Glen Ellyn.

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

Tree protection will be provided to protect parkway trees.

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

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

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

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

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

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

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

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

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

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

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

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

☒ Soil Sediment	☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
☒ Concrete	☒ Antifreeze / Coolants
☒ Concrete Truck waste	☒ Waste water from cleaning construction equipment
☒ Concrete Curing Compounds	☐ Other (specify)
☐ Solid waste Debris	☐ Other (specify)
☐ Paints	☐ Other (specify)
☐ Solvents	☐ Other (specify)
☒ Fertilizers / Pesticides	☐ Other (specify)

II. Controls

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

A. **Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed, and maintained to:
   1. Minimize the amount of soil exposed during construction activity;
   2. Minimize the disturbance of steep slopes;
   3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
   4. Minimize soil compaction and, unless infeasible, preserve topsoil.

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

   1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
   2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

   The following stabilization practices will be used for this project:

   ☒ Preservation of Mature Vegetation ☐ Erosion Control Blanket / Mulching

- ☐ Vegetated Buffer Strips
- ☒ Protection of Trees
- ☒ Temporary Erosion Control Seeding
- ☐ Temporary Turf (Seeding, Class 7)
- ☐ Temporary Mulching
- ☐ Permanent Seeding
- ☒ Sodding
- ☐ Geotextiles
- ☐ Other (specify) _____
- ☐ Other (specify) _____
- ☐ Other (specify) _____
- ☐ Other (specify) _____

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

Existing vegetation and trees will be protected during construction. Temporary Erosion control seeding will be used when topsoil will be exposed and before sod can be installed in the final stage of construction.

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

Permanent landscaping will be provided at the completion of the project. All areas of exposed soil will be permanently protected with sod.

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

The following stabilization practices will be used for this project:

- ☒ Perimeter Erosion Barrier
- ☐ Temporary Ditch Check
- ☒ Storm Drain Inlet Protection
- ☐ Sediment Trap
- ☐ Temporary Pipe Slope Drain
- ☐ Temporary Sediment Basin
- ☐ Temporary Stream Crossing
- ☐ Stabilized Construction Exits
- ☐ Turf Reinforcement Mats
- ☐ Permanent Check Dams
- ☐ Permanent Sediment Basin
- ☐ Aggregate Ditch
- ☐ Paved Ditch
- ☐ Rock Outlet Protection
- ☐ Riprap
- ☐ Gabions
- ☐ Slope Mattress
- ☐ Retaining Walls
- ☐ Slope Walls
- ☐ Concrete Revetment Mats
- ☐ Level Spreaders
- ☐ Other (specify) _____
- ☐ Other (specify) _____
- ☐ Other (specify) _____
- ☐ Other (specify) _____
- ☐ Other (specify) _____

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

Perimeter erosion barrier will be placed at locations where storm water has the potential to leave the site. Inlet and Pipe Protection will be provided at all inlets which are to receive stormwater.

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

The Perimeter Erosion Barrier and Inlet and Pipe Protection will remain in place until all sodding is in place.

D. **Treatment Chemicals**

Will polymer flocculents or treatment chemicals be utilized on this project: ☐ Yes ☒ No

If yes above, identify where and how polymer flocculents or treatment chemicals will be utilized on this project.

E. **Permanent Storm Water Management Controls:** Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water act.

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

   The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design & Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.
2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

No permanent storm water management controls will be constructed with this project; however, the storm sewer being installed will drain to a series of ponds within the Village Links of Glen Ellyn.

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

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

All management practices, controls and other provisions provided in the plan are in accordance with "IDOT Standard Specifications for Road and Bridge Construction" and the Illinois Urban Manual." The Resident Engineer will monitor to make sure the the storm water management plan and erosion site plan is being followed.

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

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
   - Approximate duration of the project, including each stage of the project
   - Rainy season, dry season, and winter shutdown dates
   - Temporary stabilization measures to be employed by contract phases
   - Mobilization time frame
   - Mass clearing and grubbing/roadside clearing dates
   - Deployment of Erosion Control Practices
   - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
   - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
   - Paving, saw-cutting, and any other pavement related operations
   - Major planned stockpiling operations
   - Time frame for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
   - Permanent stabilization activities for each area of the project

2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
    - Vehicle Entrances and Exits - Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
    - Material delivery, Storage, and Use - Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
    - Stockpile Management - Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
    - Waste Disposal - Discuss methods of waste disposal that will be used for this project.
    - Spill Prevention and Control - Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.).
    - Concrete Residuals and Washout Wastes - Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
    - Litter Management - Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
    - Vehicle and Equipment Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
    - Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
    - Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
    - Additional measures indicated in the plan.

III. Maintenance

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

During Construction, the Contractor shall clean and grade the work area to eliminate concentration of runoff and maintain or replace erosion and sediment control devices in a timely manner and as directed by the Engineer. All maintenance of erosion control systems will be the responsibility of the Contractor.

IV. Inspections

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

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

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by e-mail at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

Additional Inspections Required:

V. Failure to Comply

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.

Illinois Department of Transportation

Contractor Certification Statement

Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractors/subcontractor completing this form.

Route	Marked Route	Section
FAU 2580 & FAU 2581	Park Boulevard and Main Street	16-00081-00-PV
Project Number	**County**	**Contract Number**
9V1A(115)	DuPage	61E35

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

☐ Contractor

☐ Sub-Contractor

Print Name	Signature
Title	**Date**
Name of Firm	**Telephone**
Street Address	**City/State/Zip**

Items which the Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP:

Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

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: North Park Boulevard Improvements Project Office Phone Number, if available: 847-931-5958

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

North Park Boulevard from Roosevelt Road to Crescent Boulevard

City: Glen Ellyn State: IL Zip Code: 60137

County: DuPage Township: Milton

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

Latitude: 41.868498 (Decimal Degrees) Longitude: -88.060713 (-Decimal Degrees)

Identify how the lat/long data were determined:

☐ GPS ☐ Map Interpolation ☐ Photo Interpolation ☒ Survey ☐ Other

ISGS Public Land Survey System. Lat/long above refer to the approximate center of the Project Area

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	Village of Glen Ellyn	Name:	Village of Glen Ellyn
Street Address:	30 S. Lambert Rd.	Street Address:	30 S. Lambert Rd.
PO Box:		PO Box:	
City:	Glen Ellyn State: IL	City:	Glen Ellyn State: IL
Zip Code:	60137 Phone: 630-547-5507	Zip Code:	60137 Phone: 630-547-5507
Contact:	Rich Daubert, P.E.	Contact:	Rich Daubert, P.E.
Email, if available:	rdaubert@glenellyn.org	Email, if available:	rdaubert@glenellyn.org

Project Name: North Park Boulevard Improvements Project

Latitude: 41.868498 Longitude: -88.060713

Uncontaminated Site 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 database review was completed in the 2017 H&H PESA for the Project Area, which consists of residential and commercial properties. Seven (7) potentially impacted properties (PIPs) were identified in connection with the Project Area through the database review and site visit. Refer to the attachments for additional information.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

Twelve (12) soil borings were advanced within the Project Area on August 30, 2017. Samples were analyzed for one or more of the following: VOCs, BTEX, PNAs, Total RCRA Metals, and pH. All results achieve the CCDD requirements with the exception of SB-12. Refer to the attachments for additional information.

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

I, Jeremy J. Reynolds, P.G. (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Huff & Huff, Inc.

Street Address: 915 Harger Rd Suite 330

City: Oak Brook State: IL Zip Code: 60523

Phone: (630) 684-9100

Jeremy J. Reynolds, P.G.
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

10/11/17
Date:

LICENSED PROFESSIONAL GEOLOGIST
JEREMY J. REYNOLDS
196-001170
ILLINOIS

3/[illegible]/19
P.E. or P.G. Seal:

First Environmental Laboratories, Inc.
IL ELAP / NELAC Accreditation # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

September 08, 2017

Mr. Adam Kittler
HUFF & HUFF INC.
915 Harger Road
Suite 330
Oak Brook, IL 60523

Project ID: EEI-Park Blvd.-81.0220131.10
First Environmental File ID: 17-4677
Date Received: August 31, 2017

Dear Mr. Adam Kittler:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 004108: effective 03/24/2017 through 02/28/2018.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

Bill Mottashed
Project Manager

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Case Narrative

HUFF & HUFF INC.

Lab File ID: **17-4677**

Project ID: **EEI-Park Blvd.-81.0220131.10**

Date Received: **August 31, 2017**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The results in this report apply to the samples in the following table:

Laboratory Sample ID	Client Sample Identifier	Date/Time Collected
17-4677-001	SB-1 0-2'	8/30/2017 9:50
17-4677-002	SB-2 2-4'	8/30/2017 9:46
17-4677-003	SB-3 2-4'	8/30/2017 9:58
17-4677-004	SB-4 0-2'	8/30/2017 10:05
17-4677-005	SB-5 2-4'	8/30/2017 9:38
17-4677-006	SB-6 2-4'	8/30/2017 9:26
17-4677-007	SB-7 0-2'	8/30/2017 9:21
17-4677-008	SB-8 6-8'	8/30/2017 9:15
17-4677-009	SB-9 4-6'	8/30/2017 8:35
17-4677-010	SB-10 6-8'	8/30/2017 8:43
17-4677-011	SB-11 4-6'	8/30/2017 10:25
17-4677-012	SB-12 4-6'	8/30/2017 8:55

Sample Batch Comments:

Sample acceptance criteria were met.

Method Comments

Lab Number	Sample ID	Comments:
17-4677-012	SB-12 4-6'	*Volatile Organic Compounds* The reporting limits are elevated due to matrix interference.

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Case Narrative

HUFF & HUFF INC.

Lab File ID: **17-4677**

Project ID: **EEI-Park Blvd.-81.0220131.10**

Date Received: **August 31, 2017**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The following is a definition of flags that may be used in this report:

Flag	Description	Flag	Description
A	Method holding time is 15 minutes from collection. Lab analysis was performed as soon as possible.		
B	Analyte was found in the method blank.	L	LCS recovery outside control limits.
<	Analyte not detected at or above the reporting limit.	M	MS recovery outside control limits; LCS acceptable.
C	Sample received in an improper container for this test.	P	Chemical preservation pH adjusted in lab.
D	Surrogates diluted out; recovery not available.	Q	Result was determined by a GC/MS database search.
E	Estimated result; concentration exceeds calibration range.	S	Analysis was subcontracted to another laboratory.
G	Surrogate recovery outside control limits.	T	Result is less than three times the MDL value.
H	Analysis or extraction holding time exceeded.	W	Reporting limit elevated due to sample matrix.
J	Estimated result; concentration is less than routine RL but greater than MDL.	N	Analyte is not part of our NELAC accreditation or accreditation may not be available for this parameter.
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-1 0-2'
Sample No: 17-4677-001

Date Collected: 08/30/17
Time Collected: 9:50
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 09/05/17				
Total Solids	79.17		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/05/17				
Benzene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Polynuclear Aromatic Hydrocarbons **Method: 8270C**		**Preparation Method 3546**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Acenaphthene	< 50	50	ug/kg	
Acenaphthylene	< 50	50	ug/kg	
Anthracene	< 50	50	ug/kg	
Benzo(a)anthracene	9.4	8.7	ug/kg	
Benzo(a)pyrene	< 15	15	ug/kg	
Benzo(b)fluoranthene	< 11	11	ug/kg	
Benzo(k)fluoranthene	< 11	11	ug/kg	
Benzo(ghi)perylene	< 50	50	ug/kg	
Chrysene	< 50	50	ug/kg	
Dibenzo(a,h)anthracene	< 20	20	ug/kg	
Fluoranthene	< 50	50	ug/kg	
Fluorene	< 50	50	ug/kg	
Indeno(1,2,3-cd)pyrene	< 29	29	ug/kg	
Naphthalene	< 25	25	ug/kg	
Phenanthrene	< 50	50	ug/kg	
Pyrene	< 50	50	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Arsenic	9.3	1.0	mg/kg	
Barium	86.9	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	19.0	0.5	mg/kg	
Lead	15.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	0.5	0.2	mg/kg	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	9:50
Sample ID:	SB-1 0-2'	**Date Received:**	08/31/17
Sample No:	17-4677-001	**Date Reported:**	09/08/17

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Total Mercury	**Method: 7471B**				
Analysis Date: 09/06/17					
Mercury		0.07	0.05	mg/kg	
pH @ 25°C, 1:2	**Method: 9045D 2004**				
Analysis Date: 09/05/17 10:50					
pH @ 25°C, 1:2		8.35		Units	

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-2 2-4'
Sample No: 17-4677-002

Date Collected: 08/30/17
Time Collected: 9:46
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 09/05/17				
Total Solids	83.95		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/05/17				
Benzene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Polynuclear Aromatic Hydrocarbons **Method: 8270C**		**Preparation Method 3546**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Acenaphthene	< 50	50	ug/kg	
Acenaphthylene	< 50	50	ug/kg	
Anthracene	< 50	50	ug/kg	
Benzo(a)anthracene	15.4	8.7	ug/kg	
Benzo(a)pyrene	17	15	ug/kg	
Benzo(b)fluoranthene	18	11	ug/kg	
Benzo(k)fluoranthene	18	11	ug/kg	
Benzo(ghi)perylene	< 50	50	ug/kg	
Chrysene	< 50	50	ug/kg	
Dibenzo(a,h)anthracene	< 20	20	ug/kg	
Fluoranthene	< 50	50	ug/kg	
Fluorene	< 50	50	ug/kg	
Indeno(1,2,3-cd)pyrene	< 29	29	ug/kg	
Naphthalene	< 25	25	ug/kg	
Phenanthrene	< 50	50	ug/kg	
Pyrene	< 50	50	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Arsenic	6.7	1.0	mg/kg	
Barium	71.6	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	16.5	0.5	mg/kg	
Lead	17.2	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	0.4	0.2	mg/kg	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	9:46
Sample ID:	SB-2 2-4'	**Date Received:**	08/31/17
Sample No:	17-4677-002	**Date Reported:**	09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Total Mercury **Method: 7471B**				
Analysis Date: 09/06/17				
Mercury	< 0.05	0.05	mg/kg	
pH @ 25°C, 1:2 **Method: 9045D 2004**				
Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	7.84		Units	

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-3 2-4'
Sample No: 17-4677-003

Date Collected: 08/30/17
Time Collected: 9:58
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 09/05/17				
Total Solids	79.50		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/05/17				
Acetone	< 200	200	ug/kg	
Benzene	< 5.0	5.0	ug/kg	
Bromodichloromethane	< 5.0	5.0	ug/kg	
Bromoform	< 5.0	5.0	ug/kg	
Bromomethane	< 10.0	10.0	ug/kg	
2-Butanone (MEK)	< 100	100	ug/kg	
Carbon disulfide	< 5.0	5.0	ug/kg	
Carbon tetrachloride	< 5.0	5.0	ug/kg	
Chlorobenzene	< 5.0	5.0	ug/kg	
Chlorodibromomethane	< 5.0	5.0	ug/kg	
Chloroethane	< 10.0	10.0	ug/kg	
Chloroform	< 5.0	5.0	ug/kg	
Chloromethane	< 10.0	10.0	ug/kg	
1,1-Dichloroethane	< 5.0	5.0	ug/kg	
1,2-Dichloroethane	< 5.0	5.0	ug/kg	
1,1-Dichloroethene	< 5.0	5.0	ug/kg	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
1,2-Dichloropropane	< 5.0	5.0	ug/kg	
cis-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
trans-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
2-Hexanone	< 10.0	10.0	ug/kg	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/kg	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/kg	
Methylene chloride	< 20.0	20.0	ug/kg	
Styrene	< 5.0	5.0	ug/kg	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/kg	
Tetrachloroethene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
1,1,1-Trichloroethane	< 5.0	5.0	ug/kg	
1,1,2-Trichloroethane	< 5.0	5.0	ug/kg	
Trichloroethene	< 5.0	5.0	ug/kg	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	9:58
Sample ID:	SB-3 2-4'	**Date Received:**	08/31/17
Sample No:	17-4677-003	**Date Reported:**	09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/05/17				
Vinyl acetate	< 10.0	10.0	ug/kg	
Vinyl chloride	< 10.0	10.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
pH @ 25°C, 1:2 **Method: 9045D 2004**				
Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.58		Units	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	10:05
Sample ID:	SB-4 0-2'	**Date Received:**	08/31/17
Sample No:	17-4677-004	**Date Reported:**	09/08/17

Analyte	Result	R.L.	Units	Flags
pH @ 25°C, 1:2 **Method: 9045D 2004** Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.89		Units	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	9:38
Sample ID:	SB-5 2-4'	**Date Received:**	08/31/17
Sample No:	17-4677-005	**Date Reported:**	09/08/17

Analyte	Result	R.L.	Units	Flags
pH @ 25°C, 1:2 **Method: 9045D 2004** Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.33		Units	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	9:26
Sample ID:	SB-6 2-4'	**Date Received:**	08/31/17
Sample No:	17-4677-006	**Date Reported:**	09/08/17

Analyte	Result	R.L.	Units	Flags
pH @ 25°C, 1:2 **Method: 9045D 2004** Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.15		Units	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	9:21
Sample ID:	SB-7 0-2'	**Date Received:**	08/31/17
Sample No:	17-4677-007	**Date Reported:**	09/08/17

Analyte	Result	R.L.	Units	Flags
pH @ 25°C, 1:2 **Method: 9045D 2004** Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.50		Units	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	9:15
Sample ID:	SB-8 6-8'	**Date Received:**	08/31/17
Sample No:	17-4677-008	**Date Reported:**	09/08/17

Analyte	Result	R.L.	Units	Flags
pH @ 25°C, 1:2 **Method: 9045D 2004** Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.43		Units	

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Analytical Report

Client:	HUFF & HUFF INC.	**Date Collected:**	08/30/17
Project ID:	EEI-Park Blvd.-81.0220131.10	**Time Collected:**	8:35
Sample ID:	SB-9 4-6'	**Date Received:**	08/31/17
Sample No:	17-4677-009	**Date Reported:**	09/08/17

Analyte	Result	R.L.	Units	Flags
pH @ 25°C, 1:2 **Method: 9045D 2004** Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.54		Units	

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-10 6-8'
Sample No: 17-4677-010

Date Collected: 08/30/17
Time Collected: 8:43
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 09/05/17				
Total Solids	85.71		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/06/17				
Benzene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Polynuclear Aromatic Hydrocarbons **Method: 8270C**		**Preparation Method 3546**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Acenaphthene	< 50	50	ug/kg	
Acenaphthylene	< 50	50	ug/kg	
Anthracene	< 50	50	ug/kg	
Benzo(a)anthracene	32.8	8.7	ug/kg	
Benzo(a)pyrene	39	15	ug/kg	
Benzo(b)fluoranthene	44	11	ug/kg	
Benzo(k)fluoranthene	39	11	ug/kg	
Benzo(ghi)perylene	< 50	50	ug/kg	
Chrysene	< 50	50	ug/kg	
Dibenzo(a,h)anthracene	< 20	20	ug/kg	
Fluoranthene	86	50	ug/kg	
Fluorene	< 50	50	ug/kg	
Indeno(1,2,3-cd)pyrene	33	29	ug/kg	
Naphthalene	< 25	25	ug/kg	
Phenanthrene	< 50	50	ug/kg	
Pyrene	73	50	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Lead	12.1	0.5	mg/kg	
pH @ 25°C, 1:2 **Method: 9045D 2004**				
Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.39		Units	

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-11 4-6'
Sample No: 17-4677-011

Date Collected: 08/30/17
Time Collected: 10:25
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 09/05/17				
Total Solids	88.04		%	
BTEX Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/06/17				
Benzene	< 5.0	5.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Polynuclear Aromatic Hydrocarbons **Method: 8270C**		**Preparation Method 3546**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Acenaphthene	< 50	50	ug/kg	
Acenaphthylene	< 50	50	ug/kg	
Anthracene	< 50	50	ug/kg	
Benzo(a)anthracene	46.7	8.7	ug/kg	
Benzo(a)pyrene	47	15	ug/kg	
Benzo(b)fluoranthene	42	11	ug/kg	
Benzo(k)fluoranthene	53	11	ug/kg	
Benzo(ghi)perylene	< 50	50	ug/kg	
Chrysene	< 50	50	ug/kg	
Dibenzo(a,h)anthracene	< 20	20	ug/kg	
Fluoranthene	96	50	ug/kg	
Fluorene	< 50	50	ug/kg	
Indeno(1,2,3-cd)pyrene	39	29	ug/kg	
Naphthalene	< 25	25	ug/kg	
Phenanthrene	< 50	50	ug/kg	
Pyrene	80	50	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Lead	20.0	0.5	mg/kg	
pH @ 25°C, 1:2 **Method: 9045D 2004**				
Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	8.42		Units	

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-12 4-6'
Sample No: 17-4677-012

Date Collected: 08/30/17
Time Collected: 8:55
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540B**				
Analysis Date: 09/05/17				
Total Solids	76.73		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/06/17				
Acetone	< 20,000	200	ug/kg	
Benzene	802	5.0	ug/kg	
Bromodichloromethane	< 500	5.0	ug/kg	
Bromoform	< 500	5.0	ug/kg	
Bromomethane	< 1,000	10.0	ug/kg	
2-Butanone (MEK)	< 10,000	100	ug/kg	
Carbon disulfide	< 500	5.0	ug/kg	
Carbon tetrachloride	< 500	5.0	ug/kg	
Chlorobenzene	< 500	5.0	ug/kg	
Chlorodibromomethane	< 500	5.0	ug/kg	
Chloroethane	< 1,000	10.0	ug/kg	
Chloroform	< 500	5.0	ug/kg	
Chloromethane	< 1,000	10.0	ug/kg	
1,1-Dichloroethane	< 500	5.0	ug/kg	
1,2-Dichloroethane	< 500	5.0	ug/kg	
1,1-Dichloroethene	< 500	5.0	ug/kg	
cis-1,2-Dichloroethene	< 400	5.0	ug/kg	
trans-1,2-Dichloroethene	< 500	5.0	ug/kg	
1,2-Dichloropropane	< 500	5.0	ug/kg	
cis-1,3-Dichloropropene	< 400	4.0	ug/kg	
trans-1,3-Dichloropropene	< 400	4.0	ug/kg	
Ethylbenzene	35,100	5.0	ug/kg	
2-Hexanone	< 1,000	10.0	ug/kg	
Methyl-tert-butylether (MTBE)	< 320	5.0	ug/kg	
4-Methyl-2-pentanone (MIBK)	< 1,000	10.0	ug/kg	
Methylene chloride	< 2,000	20.0	ug/kg	
Styrene	< 500	5.0	ug/kg	
1,1,2,2-Tetrachloroethane	< 500	5.0	ug/kg	
Tetrachloroethene	< 500	5.0	ug/kg	
Toluene	< 500	5.0	ug/kg	
1,1,1-Trichloroethane	< 500	5.0	ug/kg	
1,1,2-Trichloroethane	< 500	5.0	ug/kg	
Trichloroethene	< 500	5.0	ug/kg	

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-12 4-6'
Sample No: 17-4677-012

Date Collected: 08/30/17
Time Collected: 8:55
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 09/06/17				
Vinyl acetate	< 1,000	10.0	ug/kg	
Vinyl chloride	< 1,000	10.0	ug/kg	
Xylene, Total	1,780	5.0	ug/kg	
Polynuclear Aromatic Hydrocarbons **Method: 8270C**		**Preparation Method 3546**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Acenaphthene	94	50	ug/kg	
Acenaphthylene	< 50	50	ug/kg	
Anthracene	< 50	50	ug/kg	
Benzo(a)anthracene	52.9	8.7	ug/kg	
Benzo(a)pyrene	49	15	ug/kg	
Benzo(b)fluoranthene	43	11	ug/kg	
Benzo(k)fluoranthene	58	11	ug/kg	
Benzo(ghi)perylene	< 50	50	ug/kg	
Chrysene	< 50	50	ug/kg	
Dibenzo(a,h)anthracene	< 20	20	ug/kg	
Fluoranthene	119	50	ug/kg	
Fluorene	57	50	ug/kg	
Indeno(1,2,3-cd)pyrene	49	29	ug/kg	
Naphthalene	9,190	25	ug/kg	
Phenanthrene	115	50	ug/kg	
Pyrene	96	50	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 09/06/17		Preparation Date: 09/05/17		
Arsenic	7.9	1.0	mg/kg	
Barium	122	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	19.7	0.5	mg/kg	
Lead	19.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	0.4	0.2	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 09/06/17				
Mercury	< 0.05	0.05	mg/kg	

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Analytical Report

Client: HUFF & HUFF INC.
Project ID: EEI-Park Blvd.-81.0220131.10
Sample ID: SB-12 4-6'
Sample No: 17-4677-012

Date Collected: 08/30/17
Time Collected: 8:55
Date Received: 08/31/17
Date Reported: 09/08/17

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
pH @ 25°C, 1:2 **Method: 9045D 2004**				
Analysis Date: 09/05/17 10:50				
pH @ 25°C, 1:2	7.90		Units	

CHAIN OF CUSTODY RECORD

Page ___ of ___ pgs

First Environmental Laboratories, Inc.

First Environmental Laboratories
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: Huff + Huff
Street Address: 915 Harger Rd, Suite 330
City: Oak Brook State: IL Zip: 60523
Phone: 630-684-4429 e-mail: adam.kiffer@gza.com
Send Report To: Adam Kiffer
Sampled By: Adam Kiffer

Project I.D.: EEI - Park Blvd. - 81.0220131.10
P.O. #:

Matrix Codes: S = Soil W = Water O = Other

Date/Time Taken	Sample Description	Matrix	BTEX	PNAs	VOCs	pH	Total RCRA metals	Total Lead			Hold – Do Not Analyze	Comments	Lab I.D.
8/30/17 9:50	SB-1 0-2'	S	X	X		X	X						17-4677-001
9:46	SB-2 2-4'	S	X	X		X	X						002
9:58	SB-3 2-4'	S			X	X							003
10:05	SB-4 0-2'	S				X							004
9:38	SB-5 2-4'	S				X							005
9:26	SB-6 2-4'	S				X							006
9:21	SB-7 0-2'	S				X							007
9:15	SB-8 6-8'	S				X							008
8:35	SB-9 4-6'	S				X							009
8:43	SB-10 6-8'	S	X	X		X		X					010
10:25	SB-11 4-6'	S	X	X		X		X					011
8:55	SB-12 4-6'	S		X	X	X	X						012

Analyses

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FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes__ No.__ _____°C
Received within 6 hrs. of collection:_____
Ice Present: Yes__ No__

Sample Refrigerated: Yes X No__
Refrigerator Temperature: 4 °C
5035 Vials Frozen: Yes__ No__
Freezer Temperature:_____°C

Program: ☐ TACO ☐ CCDD ☐ NPDES ☐ LUST

Notes and Special Instructions:

Relinquished By: _____ Date/Time 8/31/17
Received By: _____ Date/Time 8/31/17 9:15

Relinquished By: _____ Date/Time _____
Received By: _____ Date/Time _____

Rev. 8/15

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 North Grand Avenue, East; Post Office Box 19276; Springfield, IL 62794-9276
Division of Public Water Supplies Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: GLEN ELLYN (DuPage County – 0430450)

JAN - 4 2017

Permit Issued to:
Village of Glen Ellyn
30 South Lambert Road
Glen Ellyn, IL 60137

PERMIT NUMBER: 0356-FY2018

DATE ISSUED: January 2, 2018
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: Engineering Enterprises, Inc
NUMBER OF PLAN SHEETS: Twelve
TITLE OF PLANS: "Plans for Proposed Federal Aid Highway; FAU 2580 Park Blvd & FAU 2581 Main Street"

PROPOSED IMPROVEMENTS:

***Replacement of existing water main by installation of approximately 143 feet of 12-inch, 2050 feet of 8-inch, 95 feet of 6-inch, and 20 feet of 4-inch water main. ***

ADDITIONAL CONDITIONS:

1. All water mains shall be satisfactorily disinfected prior to use. In accordance with the requirements of AWWA C651-05, at least one set of samples shall be collected from every 1,200 feet of new water main, plus one set from the end of the line, and one set from each branch. Satisfactory disinfection shall be demonstrated in accordance with the requirements of 35 Ill. Adm. Code Section 602.310.

2. A lead informational notice must be given to each potentially affect residence at least 14 days prior to the permitted water main work. The notification must satisfy the requirements of Section 17.11 of the Environmental Protection Act. If notification is required to a residence that is a multi-dwelling building, posting at the primary entrance way to the building shall be sufficient. If the community water supply serves a population less than 3,301, alternative notification means may be utilized in lieu of an individual written notification. Refer to Section 17.11 for alternative notification requirements. Enclosed is suggested language for the notice. If this project involves water service to a significant proportion of non-English speaking consumers, the notification must contain information in the appropriate language regarding the importance and how to obtain a translated copy. The Responsible Operator in Charge of the community water system is responsible for preparing the notice. A copy of the notice used must be submitted to the Agency with the Application for Operating Permit.

3. There are no further conditions to this permit.

DCC:WRW

cc: Engineering Enterprises, Inc.
Elgin Regional Office
DuPage County Health Dept
IDPH/DEH – Plumbing and Water Quality Program

David C. Cook

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

by WRW

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

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

These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Division of Water Pollution Control, Air Pollution Control, Public Water Supplies and Land and Noise 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. (See below)

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 Board of modification, suspension or revocation of a permit:

   a. upon discovery that the permit application misrepresentation or false statements or that all relevant facts were not disclosed; or

   b. upon finding that any standard or special conditions have been violated; or

   c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

For Division of Public Water Supply Construction Permits, construction on this project, once started, may continue for four years before this permit expires. A request for extension shall be filed at least 90 days prior to the permit expiration date.

Lead Informational Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Dear Water Customer: Today's Date:_____

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

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

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

Project location and description:

_____

_____

_____

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

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

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

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

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

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

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

Purchase lead-free faucets and plumbing components.

Remove the entire lead service line.

Test your water for lead. Call us at: _____to find out how to get your water tested for lead. While we do not do the testing, we can provide a list of laboratories certified to do the testing. Laboratories will send you the bottles for sample collection. Please note that we are not affiliated with the laboratories and they will charge you a fee.

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

ADJUSTING FRAMES AND GRATES (BDE)

Effective: April 1, 2017

Add the following to Article 602.02 of the Standard Specifications:

"(s) High Density Expanded Polystyrene Adjusting Rings with Polyurea Coating (Note 4) 1043.04

(t) Expanded Polypropylene (EPP) Adjusting Rings (Note 5) 1043.05

Note 4. High density expanded polystyrene adjusting rings with polyurea coating shall meet the design load requirements of AASHTO HS20/25. The rings may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). They shall be installed and sealed underneath the frames according to the manufacturer's specifications.

Note 5. Riser rings fabricated from EPP may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). An adhesive meeting ASTM C 920, Type S, Grade N5, Class 25 shall be used with EPP adjustment rings. The top ring of the adjustment stack shall be a finish ring with grooves on the lower surface and flat upper surface. The joints between all manhole adjustment rings and the frame and cover shall be sealed using the approved adhesive. In lieu of the use of an adhesive, an internal or external mechanical frame-chimney seal may be used for watertight installation. EPP adjustment rings shall not be used with heat shrinkable infiltration barriers."

Add the following to Section 1043 of the Standard Specifications:

"**1043.04 High Density Expanded Polystyrene Adjusting Rings with Polyurea Coating.** High density expanded polystyrene adjustment rings with polyurea coating shall be designed and tested to meet or exceed an HS25 wheel load according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M306 HS-25). The raw material suppliers shall provide certifications of quality or testing using the following ASTM standards, and upon request, certify that only virgin material was used in the manufacturing of the expanded polystyrene rings.

Physical Property	Test Standard	Value	
		3.0 lb/cu ft	4.5 lb/cu ft
Compression Resistance at 10% deformation at 5% deformation at 2% deformation	ASTM D 1621	 50 - 70 45 - 60 15 - 20	 70 - 90 60 - 80 20 - 40
Flexural Strength	ASTM D 790	90 - 120	130 - 200
Water Absorption	ASTM D 570	2.0%	1.7%
Coefficient of Linear Expansion	ASTM D 696	2.70E-06 in./in./°F	2.80E-06 in./in./°F
Sheer Strength	ASTM D 732	55	80

Tensile Strength	ASTM D 1623	70 - 90	130 - 140
Water Vapor Transmission	ASTM C 355	0.82 – 0.86 perm – in.	

High density expanded polystyrene adjustment rings with polyurea coating shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to ± 0.063 in. (± 1.6 mm). Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface.

1043.05 Expanded Polypropylene (EPP) Adjusting Rings. The EPP adjusting rings shall be manufactured using a high compression molding process to produce a minimum finished density of 7.5 lb/cu ft (120 g/l). The EPP rings shall be made of materials meeting ASTM D 3575 and ASTM D 4819-13. The grade adjustments shall be designed and tested according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M 306 HS-25).

Grade rings shall contain upper and lower keyways (tongue and groove) for proper vertical alignment and sealing. The top ring, for use directly beneath the cast iron frame, shall have keyways (grooves) on the lower surface with a flat upper surface.

Adhesive or sealant used for watertight installation of the manhole grade adjustment rings shall meet ASTM C 920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A, and O.

EPP adjustment rings shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to ± 0.063 in. (± 1.6 mm). Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface."

80382

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

BUTT JOINTS (BDE)

Effective: July 1, 2016

Add the following to Article 406.08 of the Standard Specifications.

"(c) Temporary Plastic Ramps. Temporary plastic ramps shall be made of high density polyethylene meeting the properties listed below. Temporary plastic ramps shall only be used on roadways with permanent posted speeds of 55 mph or less. The ramps shall have a minimum taper rate of 1:30 (V:H). The leading edge of the plastic ramp shall have a maximum thickness of 1/4 in. (6 mm) and the trailing edge shall match the height of the adjacent pavement ± 1/4 in. (± 6 mm).

The ramp will be accepted by certification. The Contractor shall furnish a certification from the manufacturer stating the temporary plastic ramp meets the following requirements.

Physical Property	Test Method	Requirement
Melt Index	ASTM D 1238	8.2 g/10 minutes
Density	ASTM D 1505	0.965 g/cc
Tensile Strength @ Break	ASTM D 638	2223 psi (15 MPa)
Tensile Strength @ Yield	ASTM D 638	4110 psi (28 MPa)
Elongation @ Yield [1/], percent	ASTM D 638	7.3 min.
Durometer Hardness, Shore D	ASTM D 2240	65
Heat Deflection Temperature, 66 psi	ASTM D 648	176 ºF (80 ºC)
Low Temperature Brittleness, F_{50}	ASTM D 746	<-105 ºF (<-76 ºC)

1/ Crosshead speed -2 in./minute

The temporary plastic ramps shall be installed according to the manufacturer's specifications and fastened with anchors meeting the manufacturer's recommendations. Temporary plastic ramps that fail to stay in place or create a traffic hazard shall be replaced immediately with temporary HMA ramps at the Contractor's expense."

80366

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

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 working day contracts the payment will be made according to Article 109.04. For completion date contracts, an adjustment will be determined as follows.

Extended Traffic Control occurs between April 1 and November 30:

ETCP Adjustment ($) = TE x (%/100 x CUP / OCT)

Extended Traffic Control occurs between December 1 and March 31:

ETCP Adjustment ($) = TE x 1.5 (%/100 x CUP / OCT)

Where: TE = Duration of approved time extension in calendar days.
% = Percent maintenance for the traffic control, % (see table below).
CUP = Contract unit price for the traffic control pay item in place during the delay.
OCT = Original contract time in calendar days.

Original Contract Amount	Percent Maintenance
Up to $2,000,000	65%
$2,000,000 to $10,000,000	75%
$10,000,000 to $20,000,000	85%
Over $20,000,000	90%

When an ETCP 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: November 1, 2014

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 using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment's respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 1/	600-749	2002
	750 and up	2006
June 1, 2011 2/	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 2/	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

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* (http://www.epa.gov/cleandiesel/verification/verif-list.htm), 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, 2016

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

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

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

> The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
>
> (a) Withholding progress payments;
>
> (b) Assessing sanctions;
>
> (c) Liquidated damages; and/or
>
> (d) Disqualifying the Contractor from future bidding as non-responsible.

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

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

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 19.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

(a) The bidder documents that enough DBE participation has been obtained to meet the goal or,

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

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

BIDDING PROCEDURES. Compliance with this Special Provision is required prior to the award of the contract and the failure of the low bidder to comply will render the bid not responsive.

In order to assure the timely award of the contract, the low bidder shall submit:

(a) The bidder shall submit a DBE Utilization Plan on completed Department forms SBE 2025 and 2026.

(1) The final Utilization Plan must be submitted within five calendar days after the date of the letting in accordance with subsection (a)(2) of Bidding Procedures herein.

(2) To meet the five day requirement, the bidder may send the Utilization Plan electronically by scanning and sending to **DOT.DBE.UP@illinois.gov** or faxing to (217) 785-1524. The subject line must include the bid Item Number and the Letting date. The Utilization Plan should be sent as one .pdf file, rather than multiple files and emails for the same Item Number. It is the responsibility of the bidder to obtain confirmation of email or fax delivery.

Alternatively, the Utilization Plan may be sent by certified mail or delivery service within the five calendar day period. If a question arises concerning the mailing date of a Utilization Plan, the mailing date will be established by the U.S. Postal Service postmark on the certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service when the Utilization Plan is received by the Department. It is the responsibility of the bidder to ensure the postmark or receipt date is affixed within the five days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Utilization Plan is to be submitted to:

Illinois Department of Transportation
Bureau of Small Business Enterprises
Contract Compliance Section
2300 South Dirksen Parkway, Room 319
Springfield, Illinois 62764

The Department will not accept a Utilization Plan if it does not meet the five day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Utilization Plan or failure to comply with the bidding procedures set forth herein, 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. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration.

(b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of Utilization Plan approval or disapproval under the procedures of this Special Provision.

(c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and scanned or faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:

(1) The names and addresses of DBE firms that will participate in the contract;

(2) A description, including pay item numbers, of the work each DBE will perform;

(3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;

(4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;

(5) If the bidder is a joint venture comprised of DBE companies and non-DBE companies, the Utilization Plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,

(6) If the contract goal is not met, evidence of good faith efforts; the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract.

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

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors

are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

(1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with subsection (c)(6) of the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

(5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.

(7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.

(8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.

(b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period in order to cure the deficiency.

(c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217) 785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration

Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

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

(a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.

(d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:

    (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

    (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.

(e) DBE as a material supplier:

(1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

(2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.

(3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

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

(a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.

(b) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, than a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.

(c) SUBCONTRACT. The Contractor must provide DBE subcontracts to IDOT upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.

(d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

(1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or

(2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or

(3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

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

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor,

with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

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

(1) The listed DBE subcontractor fails or refuses to execute a written contract;

(2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;

(3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;

(4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;

(5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.

(6) You have determined that the listed DBE subcontractor is not a responsible contractor;

(7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;

(8) The listed DBE is ineligible to receive DBE credit for the type of work required;

(9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;

(10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.

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

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

(g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

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

80029

DOWEL BAR INSERTER (BDE)

Effective: January 1, 2017
Revised: January 1, 2018

Add the following to Article 420.03 of the Standard Specifications.

"(l) Mechanical Dowel Bar Inserter .....1103.20"

Revise the first paragraph of Article 420.05(b)(1) of the Supplemental Specifications to read:

"Preformed or Drilled Holes. If applicable, the tie bars shall be installed after the dowel bars have been tested with the MIT Scan-2 device according to Article 420.05(c)(2)b.2. The tie bars shall be installed with a nonshrink grout or chemical adhesive providing a minimum pull-out strength as follows."

Revise Article 420.05(c) of the Standard Specifications to read:

"(c) Transverse Contraction Joints. Transverse contraction joints shall consist of planes of weakness created by sawing grooves in the surface of the pavement and shall include load transfer devices consisting of dowel bars. Transverse contraction joints shall be according to the following."

Revise Article 420.05(c)(2) of the Standard Specifications to read:

"(2) Dowel Bars. Dowel Bars shall be installed parallel to the centerline of the pavement and parallel to the proposed pavement surface. Installation shall be according to one of the following methods.

a. Dowel Bar Assemblies. The assembly shall act as a rigid unit with each component securely held in position relative to the other members of the assembly. The entire assembly shall be held securely in place by means of nails which shall penetrate the stabilized subbase. At least ten nails shall be used for each 10, 11, or 12 ft (3, 3.3, or 3.6 m) section of assembly.

Metal stakes shall be used instead of nails, with soil or granular subbase. The stakes shall loop over or attach to the top parallel spacer bar of the assembly and penetrate the subgrade or subbase at least 12 in. (300 mm).

At the location of each dowel bar assembly, the subgrade or subbase shall be reshaped and re-tamped when necessary.

Prior to placing concrete, any deviation of the dowel bars from the correct horizontal or vertical alignment (horizontal skew or vertical tilt) greater than 3/8 in. in 12 in (9 mm in 300 mm) shall be corrected and a light coating of oil shall be uniformly applied to all dowel bars.

Care shall be exercised in depositing the concrete at the dowel bar assemblies so the horizontal and vertical alignment will be retained.

b. Dowel Bar Insertion. The dowel bars may be placed in the pavement slab with a mechanical dowel bar inserter (DBI) attached to a formless paver for pavements ≥ 7.0 in. (175 mm) in thickness. A light coating of oil shall be uniformly applied to all dowel bars.

The DBI shall insert the dowel bars with vibration into the plastic concrete after the concrete has been struck off and consolidated without deformation of the slab. After the bars have been inserted, the concrete shall be refinished and no voids shall exist around the dowel bars. The forward movement of the paver shall not be interrupted by the inserting of the dowel bars.

The location of each row of dowel bars shall be marked in a manner to facilitate where to insert the bars, and where to saw the transverse joint.

1. Placement Tolerances for Dowel Bars. The DBI shall place the dowel bars in the concrete pavement within the following tolerances.

   (a.) Longitudinal Translation (Mislocation). Longitudinal translation (mislocation) shall be defined as the position of the center of the dowel bar along the longitudinal axis, in relation to the sawed joint.

   The quality control tolerance for longitudinal translation shall not exceed 2.0 in (50 mm). If this tolerance is exceeded, adjustments shall be made to the paving operation.

   Any joint having two or more dowel bars with an embedment length less than 4.0 in. (100 mm) within 12 in. (300 mm) of the same wheelpath will be considered unacceptable. The left and right wheelpaths shall be determined by excluding the middle 2.5 ft (0.8 m) of the pavement lane, and by excluding the outer 1.0 ft (0.3 m) measured from each pavement lane edge. Any joint having an average dowel bar embedment length less than 5.25 in. (130 mm) will also be considered unacceptable. Embedment length shall be defined as the length of dowel bar embedded on the short side of the sawed joint. An unacceptable joint shall be replaced with a minimum of 6 ft (1.8 m) of pavement centered over the joint according to Section 442 for Class B patches.

   (b.) Horizontal Translation (Mislocation). Horizontal translation (mislocation) shall be defined as the difference in the actual dowel bar location parallel to the longitudinal or edge joint from its theoretical position as shown on the plans.

The quality control tolerance for horizontal translation shall not exceed 2.0 in. (50 mm). If this tolerance is exceeded, adjustments shall be made to the paving operation.

Any joint having a dowel bar with a translation greater than 4.0 in. (100 mm) will be considered unacceptable, but may remain in place unless the Engineer determines the joint will not function. If the joint is unable to remain in place, the joint shall be replaced with a minimum of 6 ft (1.8 m) of pavement centered over the joint according to Section 442 for Class B patches.

(c.) Vertical Translation (Mislocation). Vertical translation (mislocation) shall be defined as the difference in the vertical position of the dowel bar relative to the theoretical midpoint of the slab.

The quality control tolerance for vertical translation shall be as shown in the following table. If these tolerances are exceeded, adjustments shall be made to the paving operation.

Pavement Thickness	Dowel Bar Diameter	Vertical Translation Tolerance Above Midpoint	Vertical Translation Tolerance Below Midpoint
≥7 in. to <8 in. (≥175 mm to <200 mm)	1.25 in. (31 mm)	0.25 in. (6 mm)	0.5 in. (13 mm)
≥8 in. to <9 in. (≥200 mm to <225 mm)	1.50 in. (38 mm)	0.25 in. (6 mm)	0.5 in. (13 mm)
≥9 in. to <10 in. (≥225 mm to <250 mm)	1.50 in. (38 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)
≥10 in. (≥250 mm)	1.50 in. (38 mm)	0.75 in. (19 mm)	1.0 in. (25 mm)

Any joint having a dowel bar with top concrete cover less than T/3, where T is slab thickness, will be considered unacceptable. Any joint having 2 or more dowel bars with bottom concrete cover less than 2.0 in. (50 mm) will also be considered unacceptable. An unacceptable joint shall be replaced with a minimum of 6 ft (1.8 m) of pavement according to Section 442 for Class B patches.

(d.) Vertical Tilt or Horizontal Skew (Misalignment). Vertical tilt or horizontal skew (misalignment) shall be defined as the difference in position of the dowel bar ends with respect to each other. Vertical tilt is measured in the vertical axis whereas horizontal skew is measured in the horizontal axis. Misalignment shall be measured in terms of a joint score. The joint score shall be defined as the degree of misalignment evaluated for a single

transverse joint for each lane of pavement. The joint score shall be determined as follows:

$$Joint\ Score = \left(1 + \left(\frac{x}{x-n}\right)\sum_{i=1}^{x-n} W_i\right)$$

where:

W_i = weighting factor (Table 1) for dowel *i*
x = number of dowels in a single joint
n = number of dowels excluded from the joint score calculation due to measurement interference

Single Dowel Misalignment – The degree of misalignment applicable to a single dowel bar, calculated as:

$$Single\ Dowel\ Misalignment = \sqrt{(Horizontal\ Skew)^2 + (Vertical\ Tilt)^2}$$

Table 1. Weighting Factors in Joint Score Determination	
Single Dowel Bar Misalignment (SDM)	W, Weighting Factor
SDM ≤ 0.6 in. (15 mm)	0
0.6 in. (15 mm) < SDM ≤ 0.8 in. (20 mm)	2
0.8 in. (20 mm) < SDM ≤ 1 in. (25 mm)	4
1 in. (25 mm) < SDM ≤ 1.5 in. (38 mm)	5
1.5 in. (38 mm) < SDM	10

The quality control tolerance for vertical tilt or horizontal skew shall not exceed 0.6 in. (15 mm). If the tolerance is exceeded for either one, adjustments shall be made to the paving operation.

Any joint having a dowel bar with a vertical tilt or horizontal skew greater than 1.5 in. (38 mm) shall be cut. If more than one dowel bar is required to be cut in the joint, the joint will be considered unacceptable and shall be replaced with a minimum of 6 ft (1.8 m) of pavement centered over the joint according to Section 442 for Class B patches.

Single dowel bar misalignment shall be controlled to provide the joint scores shown in the following table.

Number of Dowel Bars in the Joint	Maximum Joint Score
< 5	4
≥ 5 but ≤ 9	8
> 9	12

A joint score greater than the specified maximum will be considered locked. Three consecutive joints with a score greater than the specified maximum total score will all be considered unacceptable.

Three consecutive locked joints shall be corrected by selecting one joint and cutting a dowel bar. Preference shall be given to cutting a dowel bar within the middle 2.5 ft (0.8 m) of the pavement lane to avoid the wheelpaths. If none of the three locked joints will have a joint score less than or equal to the specified maximum after selecting one dowel bar to cut, one of the joints shall be replaced with a minimum of 6 ft (1.8 m) of pavement centered over the joint according to Section 442 for Class B patches.

(e.) For unacceptable work, the Contractor may propose alternative repairs for consideration by the Engineer.

2. Testing of Dowel Bar Placement. The placement of the dowel bars shall be tested within 24 hours of paving with a calibrated MIT Scan-2 device according to "Use of Magnetic Tomography Technology to Evaluate Dowel Placement" (Publication No. FHWA-IF-06-006) by the Federal Highway Administration.

   A trained operator shall perform the testing, and all testing shall be performed in the presence of the Engineer. The device shall be calibrated to the type and size dowel bar used in the work according to the manufacturer's instructions. Calibration documentation shall be provided to the Engineer prior to construction. The device shall be recalibrated and/or validate readings as required by the Engineer. The device may be utilized as a process control and make necessary adjustments to ensure the dowel bars are placed in the correct location.

   (a.) Test Section. Prior to start of production paving, a test section consisting of 30 transverse joints shall be constructed. The test section may be performed on the actual pavement, but production paving shall not begin until an acceptable test section has been constructed. The test section will be considered acceptable when all of the following are met:

      (1.) 90 percent of the dowel bars meet the quality control tolerance for longitudinal, horizontal, or vertical translation (mislocation);

      (2.) 90 percent of the dowel bars meet the quality control tolerance for vertical tilt or horizontal skew deviation (misalignment); and

      (3.) none of the joints are considered unacceptable prior to a corrective measure for mislocation or misalignment.

If the test section fails, another test section consisting of 30 joints shall be constructed.

The test section requirement may be waived by the Engineer if the Contractor has constructed an acceptable test section and successfully used the DBI on a Department contract within the same calendar year.

(b.) Production Paving. After the test section is approved, production paving may begin. The mislocation and misalignment of each dowel bar for the first ten joints constructed, and every tenth joint thereafter, shall be tested.

If two consecutive days of paving result in 5 percent or more of the joints on each day being unacceptable prior to a corrective measure, production paving shall be discontinued and a new test section shall be constructed.

If any joint is found to be unacceptable prior to a corrective measure, testing of additional joints on each side of the unacceptable joint shall be performed until acceptable joints are found.

(c.) Test Report. Test reports shall be provided to the Engineer within two working days of completing each day's testing. The test report shall include the following.

(1.) Contract number, placement date, county-route-section, direction of traffic, scan date, Contractor, and name of individual performing the tests.

(2.) Provide the standard report generated from the on-board printer of the imaging technology used for every dowel and joint measured.

(3.) For every dowel measured, provide the joint identification number, lane number and station, dowel bar number or x-location, direction of testing and reference joint location/edge location, longitudinal translation, horizontal translation, vertical translation, vertical tilt, and horizontal skew.

(4.) Identify each dowel bar with a maximum longitudinal, horizontal, or vertical translation that has been exceeded. Identify each dowel bar with a maximum vertical tilt or horizontal skew deviation that has been exceeded.

(5.) Joint Score Details: Provide the joint identification number, lane number, station, and calculated joint score for each joint.

(6.) Locked Joint Identification: Identify each joint where the maximum joint score is exceeded.

(d.) Exclusions. Exclude the following from dowel bar mislocation and misalignment measurements.

(1.) Transverse construction joints (headers).

(2.) Dowel bars within 24 in. (610 mm) of metallic manholes, inlets, metallic castings, or other nearby or underlying steel reinforced objects.

(3.) The outside dowel bar when tie bars are installed with mechanical equipment in fresh concrete. For tie bar installations involving preformed or drilled holes, installation of the tie bar shall be performed after testing with the MIT Scan-2 device.

(4.) Joints located directly under high voltage power lines.

(5.) Subject to the approval of the Engineer, any other contributors to magnetic interference.

(e.) Deficiency Deduction. When the Contractor has cut 25 dowel bars to correct unacceptable joints, the Contractor shall be liable and shall pay to the Department a deficiency deduction of $500.00 for the cost of the bars. Thereafter, an additional deficiency deduction of $20.00 for each additional bar cut will be assessed."

Add the following to Section 1103 of the Standard Specifications.

"**1103.20 Mechanical Dowel Bar Inserter.** The mechanical dowel bar inserter (DBI) shall be self-contained and supported on the formless paver with the ability to move separately from the paver. The DBI shall be equipped with insertion forks along with any other devices necessary for finishing the concrete the full width of the pavement. The insertion forks shall have the ability to vibrate at a minimum frequency of 3000 VPM."

80378

EQUIPMENT PARKING AND STORAGE (BDE)

Effective: November 1, 2017

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

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

(a) When the project has adequate right-of-way, vehicles, materials, and equipment shall be located a minimum of 30 ft (9 m) from the pavement.

(b) When adequate right-of-way does not exist, vehicles, materials, and equipment shall be located a minimum of 15 ft (4.5 m) from the edge of any pavement open to traffic.

(c) Behind temporary concrete barrier, vehicles, materials, and equipment shall be located a minimum of 24 in. (600 mm) behind free standing barrier or a minimum of 6 in. (150 mm) behind barrier that is either pinned or restrained according to Article 704.04. The 24 in. or 6 in. measurement shall be from the base of the non-traffic side of the barrier.

(d) Behind other man-made or natural barriers meeting the approval of the Engineer."

80388

FUEL COST ADJUSTMENT (BDE)

Effective: April 1, 2009
Revised: August 1, 2017

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

(1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.

(2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

(3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

(4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any

modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.

(5) Category E: Structures. Structure items having a cumulative bid price that exceeds $250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units

Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / $1000

Metric Units

Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / $1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$CA = (FPI_P - FPI_L) \times FUF \times Q$

Where: CA = Cost Adjustment, $
FPI_P = Fuel Price Index, as published by the Department for the month the work is performed, $/gal ($/liter)
FPI_L = Fuel Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, $/gal ($/liter)
FUF = Fuel Usage Factor in the pay item(s) being adjusted
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

Basis of Payment. Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI_L and FPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

80229

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010
Revised: April 1, 2016

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

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

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

a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.

b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location."

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

"Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4% [1/]	91.0%
IL-9.5	Ndesign = 90	92.0 – 96.0%	90.0%
IL-9.5,IL-9.5L	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0	Ndesign = 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L	Ndesign < 90	93.0 [2/]– 97.4%	90.0%
SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%"

80246

HOT-MIX ASPHALT – TACK COAT (BDE)

Effective: November 1, 2016

Revise Article 1032.06(a) of the Standard Specifications to read:

"(a) Anionic Emulsified Asphalt. Anionic emulsified asphalts shall be according to AASHTO M 140. SS-1h emulsions used as a tack coat shall have the cement mixing test waived."

80376

LIGHTS ON BARRICADES (BDE)

Effective: January 1, 2018

Revise Article 701.16 of the Standard Specifications to read:

"**701.16 Lights.** Lights shall be used on devices as required in the plans, the traffic control plan, and the following table.

Circumstance	Lights Required
Daylight operations	None
First two warning signs on each approach to the work involving a nighttime lane closure and "ROUGH GROOVED SURFACE" (W8-I107) signs	Flashing mono-directional lights
Devices delineating isolated obstacles, excavations, or hazards at night (Does not apply to patching)	Flashing bi-directional lights
Devices delineating obstacles, excavations, or hazards exceeding 100 ft (30 m) in length at night (Does not apply to widening)	Steady burn bi-directional lights
Channelizing devices for nighttime lane closures on two-lane roads	None
Channelizing devices for nighttime lane closures on multi-lane roads	None
Channelizing devices for nighttime lane closures on multi-lane roads separating opposing directions of traffic	None
Channelizing devices for nighttime along lane shifts on multilane roads	Steady burn mono-directional lights
Channelizing devices for night time along lane shifts on two lane roads	Steady burn bi-directional lights
Devices in nighttime lane closure tapers on Standards 701316 and 701321	Steady burn bi-directional lights
Devices in nighttime lane closure tapers	Steady burn mono-directional lights
Devices delineating a widening trench	None
Devices delineating patches at night on roadways with an ADT less than 25,000	None
Devices delineating patches at night on roadways with an ADT of 25,000 or more	None

Batteries for the lights shall be replaced on a group basis at such times as may be specified by the Engineer."

Delete the fourth sentence of the first paragraph of Article 701.17(c)(2) of the Standard Specifications.

Revise the first paragraph of Article 603.07 of the Standard Specifications to read:

"**603.07 Protection Under Traffic.** After the casting has been adjusted and Class SI concrete has been placed, the work shall be protected by a barricade for at least 72 hours."

80392

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

Effective: January 1, 2018
Revised: March 2, 2018

Description. Manholes, valve vaults, and flat slab tops manufactured according to the current or previous Highway Standards listed below will be accepted on this contract:

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

When manufacturing to the current standards, the following revisions to the Standard Specifications shall apply:

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

"(g) Structural Steel (Note 4) 1006.04

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

Add the following to Article 602.02 of the Standard Specifications:

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

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

Add the following paragraph after the first paragraph of Article 602.07 of the Standard Specifications:

"Threaded rods connecting precast sections shall be brought to a snug tight condition."

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

"Catch basin Types A, B, C, and D; Manhole Type A; Inlet Types A and B; Drainage Structures Types 1, 2, 3, 4, 5, and 6; Valve Vault Type A; and reinforced concrete flat slab top

(Highway Standard 602601) shall be according to AASHTO M 199 (M 199M), except the minimum wall thickness shall be 3 in. (75 mm). Additionally, catch basins, inlets, and drainage structures shall have a minimum concrete compressive strength of 4500 psi (31,000 kPa) at 28 days and manholes, valve vaults, and reinforced concrete flat slab tops shall have a minimum concrete compressive strength of 5000 psi (34,500 kPa) at 28 days."

80393

PAVEMENT MARKING REMOVAL (BDE)

Effective: July 1, 2016

Revise Article 783.02 of the Standard Specifications to read:

"**783.02 Equipment.** Equipment shall be according to the following.

Item	Article/Section
(a) Grinders (Note 1)	
(b) Water Blaster with Vacuum Recovery	1101.12

Note 1. Grinding equipment shall be approved by the Engineer."

Revise the first paragraph of Article 783.03 of the Standard Specifications to read:

"**783.03 Removal of Conflicting Markings.** Existing pavement markings that conflict with revised traffic patterns shall be removed. If darkness or inclement weather prohibits the removal operations, such operations shall be resumed the next morning or when weather permits. In the event of removal equipment failure, such equipment shall be repaired, replaced, or leased so removal operations can be resumed within 24 hours."

Revise the first and second sentences of the first paragraph of Article 783.03(a) of the Standard Specifications to read:

"The existing pavement markings shall be removed by the method specified and in a manner that does not materially damage the surface or texture of the pavement or surfacing. Small particles of tightly adhering existing markings may remain in place, if in the opinion of the Engineer, complete removal of the small particles will result in pavement surface damage."

Revise the first paragraph of Article 783.04 of the Standard Specifications to read:

"**783.04 Cleaning.** The roadway surface shall be cleaned of debris or any other deleterious material by the use of compressed air or water blast."

Revise the first paragraph of Article 783.06 of the Standard Specifications to read:

"**783.06 Basis of Payment.** This work will be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER REMOVAL, or at the contract unit price per square foot (square meter) for PAVEMENT MARKING REMOVAL – GRINDING and/or PAVEMENT MARKING REMOVAL – WATER BLASTING."

Delete Article 1101.13 from the Standard Specifications.

80371

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: November 2, 2017

Add the following to the end of the fourth paragraph of Article 109.11 of the Standard Specifications:

"If reasonable cause is asserted, written notice shall be provided to the applicable subcontractor and/or material supplier and the Engineer within five days of the Contractor receiving payment. The written notice shall identify the contract number, the subcontract or material purchase agreement, a detailed reason for refusal, the value of payment being withheld, and the specific remedial actions required of the subcontractor and/or material supplier so that payment can be made."

80390

PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)

Effective: November 1, 2016
Revised: April 1, 2017

Revise the second paragraph of Article 701.20(h) of the Standard Specifications to read:

"For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar day for each sign as CHANGEABLE MESSAGE SIGN."

Revise this second sentence of the first paragraph of Article 1106.02(i) of the Standard Specifications to read:

"The message panel shall be a minimum of 7 ft (2.1 m) above the edge of pavement in urban areas and a minimum of 5 ft (1.5 m) above the edge of pavement in rural areas, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time."

80377

PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2017

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

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

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

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

80389

PORTLAND CEMENT CONCRETE SIDEWALK (BDE)

Effective: August 1, 2017

Revise the first paragraph of Article 424.12 of the Standard Specifications to read:

"**424.12 Method of Measurement.** This work will be measured for payment in place and the area computed in square feet (square meters). Curb ramps, including side curbs and side flares, will be measured for payment as sidewalk. No deduction will be made for detectable warnings located within the ramp."

80385

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

"(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than $1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved."

80328

RAILROAD PROTECTIVE LIABILITY INSURANCE (5 AND 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of $5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of $10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
Union Pacific Railroad Company 1400 Douglas Street Omaha, NE 68179	50 Transit Trains Typical 25 to 50 mph Max 70mph	51 Freight Trains Max 70mph

DOT/AAR No.: 174948Y
RR Division: Commuter Operation
RR Mile Post: 0022.28
RR Sub-Division: Geneva

For Freight/Passenger Information Contact: Union Pacific Phone: 402-544-5000
For Insurance Information Contact: Phone:

DOT/AAR No.:
RR Division:
RR Mile Post:
RR Sub-Division:

For Freight/Passenger Information Contact: Phone:
For Insurance Information Contact: Phone:

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

Illinois Department of Transportation
Bureau of Design and Environment
2300 South Dirksen Parkway, Room 326
Springfield, Illinois 62764

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

SUBCONTRACTOR MOBILILATION PAYMENTS (BDE)

Effective: November 2, 2017

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

"This mobilization payment shall be made at least 14 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

TEMPORARY PAVEMENT MARKING (BDE)

Effective: April 1, 2012
Revised: April 1, 2017

Revise Article 703.02 of the Standard Specifications to read:

"**703.02 Materials.** Materials shall be according to the following.

(a) Pavement Marking Tape, Type I and Type III 1095.06
(b) Paint Pavement Markings 1095.02
(c) Pavement Marking Tape, Type IV ..... 1095.11"

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

"Type I marking tape or paint shall be used at the option of the Contractor, except paint shall not be applied to the final wearing surface unless authorized by the Engineer for late season applications where tape adhesion would be a problem. Type III or Type IV marking tape shall be used on the final wearing surface when the temporary pavement marking will conflict with the permanent pavement marking such as on tapers, crossovers and lane shifts."

Revise Article 703.07 of the Standard Specifications to read:

"**703.07 Basis of Payment.** This work will be paid for as follows.

a) Short Term Pavement Marking. Short term pavement marking will be paid for at the contract unit price per foot (meter) for SHORT TERM PAVEMENT MARKING. Removal of short term pavement markings will be paid for at the contract unit price per square foot (square meter) for SHORT TERM PAVEMENT MARKING REMOVAL.

b) Temporary Pavement Marking. Where the Contractor has the option of material type, temporary pavement marking will be paid for at the contract unit price per foot (meter) for TEMPORARY PAVEMENT MARKING of the line width specified, and at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS.

Where the Department specifies the use of pavement marking tape, the Type III or Type IV temporary pavement marking will be paid for at the contract unit price per foot (meter) for PAVEMENT MARKING TAPE, TYPE III or PAVEMENT MARKING TAPE, TYPE IV of the line width specified and at the contract unit price per square feet (square meter) for PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS or PAVEMENT MARKING TAPE, TYPE IV – LETTERS AND SYMBOLS.

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

When temporary pavement marking is shown on the Standard, the cost of the temporary pavement marking and its removal will be included in the cost of the Standard."

Add the following to Section 1095 of the Standard Specifications:

"**1095.11 Pavement Marking Tape, Type IV.** The temporary, preformed, patterned markings shall consist of a white or yellow tape with wet retroreflective media incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. The tape shall be manufactured without the use of heavy metals including lead chromate pigments or other similar, lead-containing chemicals.

The white and yellow Type IV marking tape shall meet the Type III requirements of Article 1095.06 and the following.

(a) Composition. The retroreflective pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a layer of wet retroreflective media bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 40% ± 10% 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 beads or particles.

(b) Retroreflectance. The white and yellow markings shall meet the following for initial dry and wet retroreflectance.

(1) Dry Retroreflectance. Dry retroreflectance shall be measured under dry conditions according to ASTM D 4061 and meet the values described in Article 1095.06 for Type III tape.

(2) Wet Retroreflectance. Wet retroreflectance shall be measured under wet conditions according to ASTM E 2177 and meet the values shown in the following table.

Wet Retroreflectance, Initial R_L

Color	R_L 1.05/88.76
White	300
Yellow	200

(c) Color. The material 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 a 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 minimum
*Yellow	36-59

*Shall match Federal 595 Color No. 33538 and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

(d) Skid Resistance. The surface of the markings shall provide an average minimum skid resistance of 50 BPN when tested according to ASTM E 303.

(e) Sampling, Testing, Acceptance, and Certification. Prior to approval and use of the wet reflective, temporary, removable 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 certification test report shall state the lot tested, manufacturer's name, and date of manufacture.

After approval by the Department, samples and certification by the manufacturer shall be submitted for each batch 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, manufacturer's name, and date of manufacture.

All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer."

80298

TRAINING SPECIAL PROVISIONS (BDE) This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 1 . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather then clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012
Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

"**1102.01 Hot-Mix Asphalt Plant.** The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

"(11) Equipment for Warm Mix Technologies.

a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.

b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

"(e) Warm Mix Technologies.

(1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.

(2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C). WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012
Revised: April 2, 2015

The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

The report shall be submitted to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80302

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection

for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each

classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

"(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract."

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

MINIMUM WAGES FOR FEDERAL AND FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.