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Letting April 27, 2018

Notice to Bidders, Specifications and Proposal

Springfield, Illinois 62764

Contract No. 61E72
COOK County
Section 15-00059-00-CH (Streamwood)
Route FAU 1684 (East Avenue)
Project 439R-869 ()
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. April 27, 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. 61E72
   COOK County
   Section 15-00059-00-CH (Streamwood)
   Project 439R-869 ()
   Route FAU 1684 (East Avenue)
   District 1 Construction Funds

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

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

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

By Order of the
Illinois Department of Transportation

Randall S. Blankenhorn,
Secretary

CONTRACT 61E72

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	175	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			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	177	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	178	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	182	X	Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
	80387			Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
*	80029	185	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	April 2, 2018
	80378			Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
	80388	196	X	Equipment Parking and Storage	Nov. 1, 2017	
	80229			Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
	80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2017
	80246	197	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	198	X	Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
	80392	199	X	Lights on Barricades	Jan. 1, 2018	
	80336			Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
*	80393	201	X	Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	March 2, 2018
	80045			Material Transfer Device	June 15, 1999	Aug. 1, 2014
*	80394			Metal Flared End Section for Pipe Culverts	Jan. 1, 2018	April 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	203	X	Pavement Marking Removal	July 1, 2016	
	80390	204	X	Payments to Subcontractors	Nov. 2, 2017	
	80377	205	X	Portable Changeable Message Signs	Nov. 1, 2016	April 1, 2017
	80389	206	X	Portland Cement Concrete	Nov. 1, 2017	
	80359			Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2017
	80385	207	X	Portland Cement Concrete Sidewalk	Aug. 1, 2017	
	80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
	80328	208	X	Progress Payments	Nov. 2, 2013	
	3426I			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
	80157			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
*	80397	209	X	Subcontractor and DBE Payment Reporting	April 2, 2018	
	80391	210	X	Subcontractor Mobilization Payments	Nov. 2, 2017	
	80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016
	80298			Temporary Pavement Marking (NOTE: This special provision was previously named *"Pavement Marking Tape Type IV"*.)	April 1, 2012	April 1, 2017
	20338	211	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	214	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
	80302	216	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 Illinois Department of Transportation's (IDOT) "Standard Specifications for Road and Bridge Construction," adopted April 1, 2016, (hereinafter referred to as the "Standard Specifications"); the "Manual on Uniform Traffic Control Devices for Streets and Highways" the "Manual of Test Procedures of Materials", in effect on the date of invitation for bids; the "Supplemental Specifications and Recurring Special Provisions," latest edition as indicated on the Check Sheet included herein, and Standard Specifications for Water and Sewer Main Construction in Illinois latest edition which apply to and govern the construction of FAU 1684 East Avenue at Irving Park Road, Section No. 15-00059-00-CH, Project No. 439R(869), Job No. C-91-062-17, Contract No. 61E72, Village of Streamwood, Cook County. In case of conflict with any or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The project is located on East Avenue (FAU 1684) from Briarwood Avenue to 510.68 feet north of the intersection of Irving Park Road and East Avenue. Pavement marking modifications will take place on East Avenue south of Irving Park Road for 192.33 feet. The total gross and net length of the project is 703.1 feet (0.13 miles) within the Village of Streamwood in Cook County.

DESCRIPTION OF PROJECT

The work consists of roadway resurfacing and widening, new combination concrete curb and gutter, traffic signal modernization, storm sewer, pavement markings, ADA improvements, restoration, traffic staging, and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

LIST OF WORK ITEMS NOT PAID FOR SEPARATELY

The Contractor's attention is called to several specific work items as noted on the Contract Plans and Special Provisions and in addition to the lists in the Standard Specifications that will not be paid for separately. Below is a listing of these items and the pay item they are to be included within for general information only. The list is not intended to be all-inclusive and, therefore, the Contractor is responsible to perform all work according to the Plans, Special Provisions, and the Standard Specifications.

Pay Item Number	Designation	Work Item Included
20200100	EARTH EXCAVATION	Disposal of abandoned utilities that conflict with construction. Materials shall be disposed of outside the limits of the right of way.
44000100	PAVEMENT REMOVAL	Saw cutting of pavements, curb and gutter, sidewalk, etc. shall be to full depth and shall result in a clean straight edge on the portion remaining.
44000200	DRIVEWAY PAVEMENT REMOVAL	
44000500	COMBINATION CURB AND GUTTER REMOVAL	
44000600	SIDEWALK REMOVAL	
67100100	MOBILIZATION	Removal of loose materials deposited in the flow line of

		drainage structures at the end of each working day.
60252800	CATCH BASINS TO BE RECONSTRUCTED	The cost to locate the existing drainage structures, storm sewers, water mains, sanitary sewers, and any other public or private utilities. The existing frame and lid locations as shown on the plans are approximate.
60257900	MANHOLES TO BE RECONSTRUCTED	
60300305	FRAMES AND LIDS TO BE ADJUSTED	
VARIOUS	PROPOSED UTILITY	The cost of the utility exploration shall be included in the cost of the proposed utility.

MAINTENANCE OF ROADWAYS
Effective: September 30, 1985 Revised: November 1, 1996

Beginning on the date that the Contractor begins work on this project, he 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 for in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

STATUS OF UTILITIES (D-1)
Effective: June 1, 2016

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.

UTILITIES TO BE ADJUSTED

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

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
East Avenue: 103+15, 30' LT	Sanitary Sewer	Existing sewer frames and lids are in pavement. Structures may need to be adjusted and sewer will be extended to outside pavement.	Contractor	Contractor to adjust sanitary sewer structures' frames and lids to new pavement elevation and extend sewer. 2 days for work.
East Avenue; 100+55, 43.8 LT	Power Pole	Existing power pole needs to be relocated.	Com Ed	Com Ed to relocate. 5 days for work.

7 days for utility adjustments.
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
Village of Streamwood	Matt Mann, P.E., Director of Engineering and Public Works	565 S. Bartlett Road, Streamwood, IL 60107	630-736-3850	mmann@streamwood.org
ComEd	Aaron Babu, Project Engineer	1 Lincoln Center, Oakbrook Terrace, IL	708-683-9348	Aaron.babu@ComEd.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.

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER	ACTION
East Avenue	Watermain	Watermain and fire hydrant in the eastern parkway. No conflicts anticipated.	Village of Streamwood	Contractor shall perform work as not to impact and protect during construction.
East Avenue	Sanitary Sewer	The contractor is alerted that there is a sanitary crossing at 103+15.	Village of Streamwood	Contractor shall make sure crossing isn't impacted.
East Avenue	Overhead Lines	The contractor is alerted that there are overhead lines crossing East Avenue at 100+50. There are existing overhead lines running parallel to the existing sidewalk on the west side of East Avenue. There are no conflicts within the proposed improvements.	ComEd	Contractor shall perform work as not to impact overhead lines during construction
East Avenue	Gas	The contractor is alerted that there is an MOP underground gas main in the center of the pavement on East Avenue.	Nicor	Gas main shall be protected from damage by contractor during construction.
East Avenue	Gas	A pipeline crosses East Avenue approximately 100 feet north of the project limits. There are no conflicts within the proposed improvements.	Kinder Morgan	Gas main shall be protected from damage by contractor during construction.

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 Oak Brook, IL 60523	630-573-6414	Ja1763@att.com
ComEd	Aaron Babu		630-437-3381	Aaron.Babu@Comed.com
Nicor Gas	Bruce Koppang	1844 Ferry Road Naperville, IL 60563	630-388-3046	BKoppan@southernco.com
Kinder Morgan	Nick Reisdorff		719-520-4646	Nick_Reissdorff@kingermorgan.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.

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 16, 2018** except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within 5 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.

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

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 interim and completion dates and the number of working days.

FAILURE TO COMPLETE THE WORK ON TIME
Effective: September 30, 1985
Revised: January 1, 2007

Should the Contractor fail to complete the work on or before the completion dates as specified in the Special Provision for "Completion Date Plus Working Days", or within such extended time as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of $2,500, not as a penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

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

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

WORK RESTRICTIONS

Construction work may be performed Monday thru Friday during the hours of 7:00 A.M. to 5:00 P.M. Construction work may be performed until 7:00 P.M. Monday thru Friday with prior authorization from the Public Works Director. Construction work may also be performed on Saturday from 8:00 A.M. to 4:00 P.M. No work shall be performed on Sunday. No work may be performed prior or beyond this period without prior written approval from the engineer as coordinated with the Village. No compensation will be paid for any inconvenience, delay, or loss experienced by the contractor because of adjustments to their normal schedule.

PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL

Description: Portland Cement Concrete Sidewalk, 5 Inch, Special shall be installed at the locations indicated in the contract plans. The work will be in accordance with applicable portions of Sections 424 and 503 of the Standard Specifications and as detailed on the Contract Plans Village of Streamwood Details.

Method of Measurement: This item shall be measured for payment in place and the area computed in square feet of surface area as measured in plan. Curb ramps will be measured for payment as sidewalk. No deduction will be made for detectable warnings located within the ramp.

Basis of Payment: This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL, which price shall include all formwork, materials, reinforcement bars, epoxy coated, labor, backfill and equipment necessary to perform the work as shown in the plans and described herein.

COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT

This work shall consist of the removal and replacement of existing concrete curb and gutter at locations as determined by the Engineer. The purpose of this work is to replace curb and gutter that is damaged and/or requires replacement to improve the street drainage or to install ADA accessible curb ramps. The

replacement curb and gutter section shall be as directed by the Engineer and match that of the existing. This work shall be done in accordance with Section 440 and Section 606 of the Standard Specifications and the concrete shall meet the requirements of Article 1020.04 for SI concrete.

The Contractor shall use High Early Strength concrete for curb and gutter replacement at the location of the driveways at no additional cost to the contract. The Contractor shall perform the work in a manner causing minimal inconvenience to the residents and motoring public. The trenches created by the removal operations in front of the Driveways shall be filled with Aggregate to provide access to the residents to their driveways, except for curb and gutter replacement when the driveways will be closed to the residents for 48 hours.

The minimum gutter flag depth of the new curb and gutter will be ten inches (10”) regardless of the size and type of the existing curb and gutter. Additional excavation required for the installation of the replacement curb and gutter will not be paid for separately, but included in the contract unit price for combination concrete curb and gutter removal and replacement.

Reinforcing bars may be embedded in old concrete curb. Sawing, removal, and disposal of reinforcing bars will not be paid for separately but shall be included in the cost of the item removed.

The contractor shall field verify the curb and gutter type. It has been estimated that combination curb and gutter type B-6.12 is located in the medians, the combination curb and gutter estimated along Park Avenue is Type B-6.18. The cost of removal and replacement of Type B-6.12 and Type B-6.18 will not be paid separately but will be paid for as “Combination Concrete Curb and Gutter Removal and Replacement”.

If the existing curb and gutter is currently painted and will be removed and replaced, the work associated with repainting the new curb and gutter should be included in the cost of the item “Combination Concrete Curb and Gutter Removal and Replacement”.

Removal of the existing curb and gutter shall be performed with a full-depth perpendicular saw cut, done in such a manner as to prevent damage to the curb and gutter to remain in place. Any saw cut edges broken off or otherwise damaged, or any curb sections to remain in place that are raised up or pushed down by the removal operation shall be removed and replaced to the satisfaction of the Engineer with no additional compensation to be made to the Contractor. The Contractor shall note that the Engineer will measure the curb and gutter as marked for replacement prior to removal of the existing curb. This measurement, as marked, will be the final payment quantity and shall be verified by the Contractor prior to removal.

Where new curb and gutter meets existing curb and gutter to remain, the gutters shall be connected with two 5/8" diameter reinforcing bars, twelve inches (12") long. Holes 5/8" in diameter shall be drilled six inches (6") into the existing concrete curb and gutter prior to driving reinforcing bars into place.

Contraction joints shall be provided at uniform intervals not to exceed ten feet (10'). Construction joints with dowel bars shall be provided at the end of a day’s pour. Expansion joints shall be constructed at intervals not to exceed thirty feet (30') or as determined by the Engineer and shall consist of a minimum of one inch (1") thick preformed expansion joint filler conforming to the cross-section of the curb and gutter and shall be provided with two (2) No. 5 (#5) by eighteen inch (18") coated smooth dowel bars conforming to Article 1006.11(b) of the Standard Specifications. The dowel bars shall be fitted with a cap having a pinched stop that will provide a minimum of one inch (1") of expansion.

Removal of the existing pavement will be required in order to install a full front face form. Steel angle pieces will not be allowed for forming. The area between the edge of the existing pavement and the face of the new gutter shall be cleaned of all loose material and shall be filled with Class PV/ SI concrete, to a minimum of six inch (6") width. The pavement removal and installation of the concrete wedge will not be

paid for separately, but included in the cost of COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT.

This work shall be paid for at the contract unit price per FOOT for COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT which price shall include all of the above including 4"of Aggregate Base Course Type B (Crushed) under the new curb where unsuitable materials are found, and as directed by the Engineer.

TRAFFIC CONTROL PLAN
Effective: September 30, 1985
Revised: January 1, 2007

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

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

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

Standards
701006-05, 701101-05, 701301-04, 701311-03, 701427-05, 701501-06, 701701-10, 701801-06, 701901-07, 704001-08

Details
Suggested Maintenance of Traffic Plans
Traffic Control and Protection for Side Roads, Intersections and Driveways (TC-10)
District One Typical Pavement Markings (TC-13)
Traffic Control and Protection at Turn Bays (To Remain Open to Traffic) (TC-14)
Pavement Marking Letters and Symbols for Traffic Staging (TC-16)
Arterial Road Information Sign (TC-22)
Driveway Entrance Signing (TC-26)

Special Provisions
Maintenance of Roadways
Public Convenience and Safety (D-1)
Traffic Control and Protection (Arterials) (D-1)
Temporary Information Signing
Pavement Marking Removal (BDE)
Keeping Arterial Roadways Open to Traffic (Lane Closures Only)
Equipment Parking and Storage (BDE)
Lights on Barricades (BDE)

TRAFFIC CONTROL AND PROTECTION (ARTERIALS)
Effective: February 1, 1996
Revised: March 1, 2011

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

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

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

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

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

PUBLIC CONVENIENCE AND SAFETY (D-1)
Effective: May 1, 2012
Revised: July 15, 2012

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

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

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

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

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

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

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)	1090.01

Note 1. The Contractor may use 16mm (5/8 inch) instead of 19mm (3/4 inch) 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 1084.02(b).
Note 4. The overlay panels shall be 2mm (0.08 inch) 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 702.05 and Article 720.04. The signs shall be 2.1m (7') above the near edge of the pavement and shall be a minimum of 600mm (2') beyond the edge of the paved shoulder. A minimum of 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 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 feet for TEMPORARY INFORMATION SIGNING, which price shall be full compensation for all labor, equipment and materials required for performing the work as herein specified.

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.

(a) 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.

(b) 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."

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	1004.07
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2 and 3)	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate 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

Grad No.	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric) 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.

SLIPFORM PAVING (D-1)
Effective: November 1, 2014

Revise Article 1020.04 Table 1, Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 1/2 to 1 1/2 in.”

Revise Article 1020.04 Table 1 (metric), Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 13 to 40 mm.”

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

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	Allowed Alone or in Combination [5/]: Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA Low ESAL	Stabilized Subbase or Shoulders	Allowed Alone or in Combination [5/]: Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag[1/] Crushed Concrete
HMA High ESAL Low ESAL	Binder IL-19.0 or IL-19.0L SMA Binder	Allowed Alone or in Combination [5/ 6/]: Crushed Gravel Carbonate Crushed Stone[2/] Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete[3/]
HMA High ESAL Low ESAL	C Surface and Leveling Binder IL-9.5 or IL-9.5L SMA Ndesign 50 Surface	Allowed Alone or in Combination [5/]: Crushed Gravel Carbonate Crushed Stone[2/] Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag[4/] Crushed Concrete[3/]
HMA High ESAL	D Surface and Leveling Binder IL-9.5 SMA Ndesign 50 Surface	Allowed Alone or in Combination [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/]

<table>
<tr><th>Use</th><th>Mixture</th><th colspan="2">Aggregates Allowed</th></tr>
<tr><td></td><td></td><td colspan="2"><u>Other Combinations Allowed:</u></td></tr>
<tr><td></td><td></td><td>Up to...</td><td>With...</td></tr>
<tr><td></td><td></td><td>25% Limestone</td><td>Dolomite</td></tr>
<tr><td></td><td></td><td>50% Limestone</td><td>Any Mixture D aggregate other than Dolomite</td></tr>
<tr><td></td><td></td><td>75% Limestone</td><td>Crushed Slag (ACBF) or Crushed Sandstone</td></tr>
<tr><td>HMA
High ESAL</td><td>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></td><td></td><td colspan="2"><u>Other Combinations Allowed:</u></td></tr>
<tr><td></td><td></td><td>Up to...</td><td>With...</td></tr>
<tr><td></td><td></td><td>50% Dolomite[2/]</td><td>Any Mixture E aggregate</td></tr>
<tr><td></td><td></td><td>75% Dolomite[2/]</td><td>Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone</td></tr>
<tr><td></td><td></td><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>HMA
High ESAL</td><td>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></td><td></td><td colspan="2"><u>Other Combinations Allowed</u>:</td></tr>
</table>

Use	Mixture	Aggregates Allowed	
		Up to...	*With...*
		50% Crushed Gravel[2/], Crushed Concrete[3/], or Dolomite[2/]	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone

1/ Crushed steel slag allowed in shoulder surface only.
2/ Carbonate crushed stone (limestone) and/or crushed gravel shall not be used in SMA Ndesign 80. 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."

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."

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".

(c) 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."

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."

COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1)
Effective: November 1, 2011
Revised: November 1, 2013

This work shall be according to Section 1004.05 of the Standard Specifications except for the following:

Reclaimed Asphalt Pavement (RAP) maybe blended with gravel, crushed gravel, crushed stone crushed concrete, crushed slag, chats, crushed sand stone or wet bottom boiler slag. The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". The RAP shall be uniformly graded and shall pass the 1.0 in. (25 mm) screen. When RAP is blended with any of the coarse aggregate listed above, the blending shall be done mechanically with calibrated feeders. The feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered. The final blended product shall not contain more than 40 percent by weight RAP.

The coarse aggregate listed above shall meet CA 6 and CA 10 gradations prior to being blended with the processed and uniformly graded RAP. Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

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.

SIGN SHOP DRAWING SUBMITTAL
Effective: January 22, 2013

Add the following paragraph to Article 720.03:

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

EMBANKMENT II
Effective: March 1, 2011
Revised: November 1, 2013

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

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

CONSTRUCTION REQUIREMENTS

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

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

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

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

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

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

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

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

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

items of excavation.

CONNECTION TO EXISTING DRAINAGE STRUCTURE
CONNNECTION TO EXISTING SEWER

This item shall consist of the construction of proposed storm sewer connection to existing storm sewers or drainage structures at locations shown on the plans and as directed by the Engineer.

The new opening in the existing drainage structure or storm sewer shall be made in a manner to minimize any structural damage to the storm sewer. Any damage to the existing drainage structure or storm sewer shall be repaired to the Engineer's satisfaction at no additional cost to the Department.

A storm sewer connection to an existing drainage structure shall be sealed with class SI concrete or brick and suitable mortar to the satisfaction of the Engineer.

The storm sewer connection to the existing storm sewer shall be sealed with class SI concrete or brick and suitable mortar, per District One Detail BD-07 Detail "C", to the satisfaction of the Engineer.

Method of Measurement: CONNECTION TO EXISTING DRAINAGE STRUCTURE and CONNECTION TO EXISTING SEWER will not be measured for payment and shall be considered included to the proposed storm sewer or pipe culvert.

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)

This work consists of furnishing labor, material and equipment to adjust frames and lids on the drainage and utility structures within the pavement prior to milling, and adjusting to final grade prior to placing the surface course. Any individual rings for storm sewer adjustments under 3" in height must be IDOT approved plastic or rubber with steel shims. All sanitary sewer adjusted structures shall have concrete rings. The work shall be performed in accordance with IDOT District One Detail BD-08 as directed by the Engineer.

This work shall be measured for payment per Each.

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

FRAMES WITH CLOSED LIDS

All frames with closed lids to be furnished as part of the contract for construction, adjustment or reconstruction of any manhole, catch basin, inlet, valve vault or meter vault shall have cast into the lid one of the following words: VILLAGE OF STREAMWOOD: all lids to be used on water structures shall bear the word "WATER." all lids to be used on storm sewer structures shall bear the word "STORM." all lids to be used on sanitary system structures shall bear the word "SANITARY." Any additional cost for this requirement will not be paid for separately, but shall be considered as included in the unit bid prices of the frames and closed lids provided.

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."

CLEANING DRAINAGE SYSTEM

Description: This work shall consist of the cleaning of all existing storm sewers at locations indicated on the plans, at the conclusion of the project, after erosion control measures have been removed.

Construction Requirements: This work can be completed by mechanical suction methods. Flushing of the material downstream is not authorized. Materials from the storm sewers shall be properly disposed of by the Contractor off site. Acceptance of this work shall be made by the Engineer. Should material be deposited in the storm sewers to be cleaned following the completion of the work, the affected storm sewers shall be re-cleaned by the Contractor at no additional expense to the Department. Any damage to the storm sewer or surrounding area caused by the Contractor in prosecution of this work shall be repaired or replaced by the Contractor, the cost of which is the responsibility of the Contractor.

Method of Measurement: The storm sewer to be cleaned will be measured in feet, regardless of pipe size, from inside edge to inside edge between inlets, manholes, or catch basins. 100 percent local cost non-participating

Basis of Payment: This work will be paid at the contract unit price per foot for CLEANING DRAINAGE SYSTEM, regardless of pipe size or type, which payment shall constitute full compensation for all removal, disposal of removed debris, and incidentals necessary to complete the work as specified.

TEST HOLES

Description.
This item shall consist of excavation for the purpose of locating existing utilities at locations where conflict is possible with proposed construction.

Construction Requirements.
Test holes will be dug at locations authorized by the Engineer. The Contractor shall be responsible for notifying the utility concerned.
After the Engineer has verified the location of the utility, the test hole shall be backfilled with either the excavated material or crushed limestone with CA-7 gradation, as directed by the Engineer. Any excess material shall be disposed of in accordance with Article 202.03.

Basis of Payment.
This item shall not be paid for separately, but shall be included in the contract unit price for STORM SEWERS of the type and diameter specified. No separate payment will be made for stone used to backfill the test holes.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

This work shall be according to Article 669 of the Standard Specifications and the following:

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is pre-qualified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

General. This Special Provision will likely require the Contractor to subcontract for the execution of certain activities.

All contaminated materials shall be managed as either "uncontaminated soil" or non-special waste. This work shall include monitoring and potential sampling, analytical testing, and management of a material contaminated by regulated substances. The Environmental Firm shall continuously monitor all soil excavation for worker protection and soil contamination. **Phase I Preliminary Engineering information is available through the District's Environmental Studies Unit.** Soil samples or analysis without the approval of the Engineer will be at no additional cost to the Department. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit whichever is less.

The Contractor shall manage any excavated soils and sediment within the following areas:

Site 3118-4 (Commercial Building)

- Station 511+90 to Station 512+70 (CL Irving Park Road), 0 to 90 feet RT (Commercial Building, PESA Site 3118-4, 2000-2005 Irving Park Road, Hanover Park). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene.

Site 3118-5 (BP Gas Station)

- Station 511+20 to Station 511+75 (CL Irving Park Road), 0 to 45 feet LT (BP Gas Station, PESA Site 3118-5, 1236 Irving Park Road, Streamwood). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, and Manganese.
- Station 511+75 to Station 512+25 (CL Irving Park Road), 0 to 80 feet LT (BP Gas Station, PESA Site 3118-5, 1236 Irving Park Road, Streamwood). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, and Manganese.
- Station 512+25 to Station 512+70 (CL Irving Park Road), 0 to 45 feet LT (BP Gas Station, PESA Site 3118-5, 1236 Irving Park Road, Streamwood). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, and Manganese.
- Station 100+50 to Station 101+15 (CL East Avenue), 0 to 45 feet LT (BP Gas Station, PESA Site 3118-5, 1236 Irving Park Road, Streamwood). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.

Site 3118-6 (Firestone Complete Auto)

- Station 512+70 to Station 513+75 (CL Irving Park Road), 0 to 90 feet RT (Firestone Complete Auto, PESA Site 3118-6, 1960 Irving Park Road, Hanover Park). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Lead, and Manganese.

Site 3118-7 (Commercial Building)

- Station 512+70 to Station 513+75 (CL Irving Park Road), 0 to 45 feet LT (Commercial Building, PESA Site 3118-7, 1300 Irving Park Road, Streamwood). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, and Manganese.
- Station 100+40 to Station 101+15 (CL East Avenue), 0 to 40 feet RT (Commercial Building, PESA Site 3118-7, 1300 Irving Park Road, Streamwood). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, and Manganese.

TRAFFIC SIGNAL GENERAL REQUIREMENTS
Effective: May 22, 2002
Revised: March 25, 2016
800.01TS

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

- All material furnished shall be new unless otherwise noted herein.
- Traffic signal construction and maintenance work shall be performed by personnel holding current IMSA Traffic Signal Technician Level II certification. A copy of the certification shall be immediately available upon request of the Engineer.
- The work to be done under this contract consists of furnishing, installing and maintaining all traffic signal work and items as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer.

Definitions of Terms.
Add the following to Section 101 of the Standard Specifications:

101.56 Vendor. Company that sells a particular type of product directly to the contractor or the Equipment Supplier.

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

- Be full service with on-site facilities to assemble, test and trouble-shoot traffic signal controllers and cabinet assemblies.
- Maintain an inventory of IDOT District One approved controllers and cabinets.
- Be staffed with permanent sales and technical personnel able to provide traffic signal controller and cabinet expertise and support.
- Technical staff shall hold current IMSA Traffic Signal Technician Level III certification and shall attend traffic signal turn-ons and inspections with a minimum 14 calendar day notice.

Submittals.
Revise Article 801.05 of the Standard Specifications to read:

All material approval requests shall be submitted electronically through the District's SharePoint System unless directed otherwise by the Engineer. Electronic material submittals shall follow the District's Traffic Operations Construction Submittals guidelines. General requirements include:

1. All material approval requests shall be made prior to or no later than the date of the preconstruction meeting. A list of major traffic signal items can be found in Article 801.05. Material or equipment which is similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.
2. Product data and shop drawings shall be assembled by pay item. Only the top sheet of each pay item submittal will be stamped by the Department with the review status, except shop drawings for mast arm pole assemblies and the like will be stamped with the review status on each sheet.
3. Original manufacturer published product data and shop drawing sheets with legible dimensions and details shall be submitted for review.
4. When hard copy submittals are necessary, four complete copies of the manufacturer's descriptive literatures and technical data for the traffic signal materials shall be submitted. For hard copy or

electronic submittals, the descriptive literature and technical data shall be adequate for determining whether the materials meet the requirements of the plans and specifications. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.

5. When hard copy submittals are necessary for structural elements, four complete copies of the shop drawings for the mast arm assemblies and poles, and the combination mast arm assemblies and poles showing, in detail, the fabrication thereof and the certified mill analyses of the materials used in the fabrication, anchor rods, and reinforcing materials shall be submitted.
6. Partial or incomplete submittals will be returned without review.
7. Certain non-standard mast arm poles and special structural elements will require additional review from IDOT's Central Office. Examples include ornamental/decorative, non-standard length mast arm pole assemblies and monotube structures. The Contractor shall account for the additional review time in his schedule.
8. The contract number or permit number, project location/limits and corresponding pay code number must be on each sheet of correspondence, catalog cuts and mast arm poles and assemblies drawings.
9. Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections, and/or tests of material shall be complete with all test data, dates, and times.
10. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Incomplete'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.
11. The Contractor shall secure approved materials in a timely manner to assure construction schedules are not delayed.
12. All submitted items reviewed and marked 'APPROVED AS NOTED', 'DISAPPROVED', or 'INCOMPLETE' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments, with a disposition of previous comments to verify contract compliance at no additional cost to the contract.
13. Exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.
14. Contractor shall not order major equipment such as mast arm assemblies prior to Engineer approval of the Contractor marked proposed traffic signal equipment locations to assure proper placement of contract required traffic signal displays, push buttons and other facilities. Field adjustments may require changes in proposed mast arm length and other coordination.

Marking Proposed Locations.

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

Add the following to Article 801.09 of the Standard Specifications:

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

Inspection of Electrical Systems.
Add the following to Article 801.10 of the Standard Specifications:

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

Maintenance and Responsibility.
Revise Article 801.11 of the Standard Specifications to read:

a. Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of Illinois, Department of Transportation, Division of Highways, County, Private Developer, Municipality or Transit Agency in which they are located. Once the Contractor has begun any work on any portion of the project, all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," shall become the full responsibility of the Contractor. The Contractor shall supply the Engineer, Area Traffic Signal Maintenance and Operations Engineer, IDOT ComCenter and the Department's Electrical Maintenance Contractor with two 24-hour emergency contact names and telephone numbers.

b. Automatic Traffic Enforcement equipment such as red lighting running and railroad crossing camera systems are owned and operated by others and the Contractor shall not be responsible for maintaining this equipment.

c. Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.

d. When the project has a pay item for "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," the Contractor must notify both the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. The Department will attempt to full-fill the Contractor's inspection date request(s), however workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested inspection date(s) cannot be scheduled by the Department. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.

e. The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15)

minutes, must have prior approval of the Engineer. Approval to shut down the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.

f. The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals and other equipment noted herein. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of $1000 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of $1000 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The Department may inspect any signalizing device on the Department's highway system at any time without notification.

g. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

h. The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.

i. The Contractor shall maintain the traffic signal in normal operation during short or long term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power to critical locations shall not be for separately but shall be included in the contract.

Damage to Traffic Signal System.
Add the following to Article 801.12(b) of the Standard Specifications to read:

Any traffic signal control equipment damaged or not operating properly from any cause shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted. Cable splices are only allowed at the bases pf post and mast arms.

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

Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause, shall be the responsibility of the municipality or the Automatic Traffic Enforcement company per Permit agreement.

Traffic Signal Inspection (TURN-ON).
Revise Article 801.15(b) of the Standard Specifications to read:

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

When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specifications, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Area 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. The Department will attempt to full-fill the Contractor's turn-on and inspection date request(s), however workload and other conditions may prevent the Department from accommodating specific dates or times. The Contractor shall not be entitled to any other compensation if the requested turn-on and inspection date(s) cannot be scheduled by the Department. The Department will not grant a field inspection until written or electronic notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Preemption (EVP) is included in the project. When the contract includes the item RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, OPTIMIZE TRAFFIC SIGNAL SYSTEM, or TEMPORARY TRAFFIC SIGNAL TIMINGS, the Contractor must notify the SCAT Consultant of the turn-on/detour implementation schedule, as well as stage changes and phase changes during construction.

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

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

Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.

The District requires the following Final Project Documentation from the Contractor at traffic signal turn-ons in electronic format in addition to hard copies where noted. A CD/DVD shall be submitted with separate folders corresponding to each numbered title below. The CD/DVD shall be labelled with date, project location, company and contract or permit number. Record Drawings, Inventory and Material Approvals shall be submitted prior to traffic signal turn-on for review by the Department as described here-in.

Final Project Documentation:

1. Record Drawings. Signal plans of record with field revisions marked in red ink. One hard copy set of 11"x17" record drawings shall also be provided.

2. Inventory. Inventory of new and existing traffic signal equipment including cabinet types and devices within cabinets in an Excel spread sheet format. One hard copy shall also be provided.
3. Pictures. Digital pictures of a minimum 12M pixels of each intersection approach showing all traffic signal displays and equipment. Pictures shall include controller cabinet equipment in enough detail to clearly identify manufacture and model of major equipment.
4. Field Testing. Written notification from the Contractor and the equipment vendor of satisfactory field testing with corresponding material performance measurements, such as for detector loops and fiber optic systems (see Article 801.13). One hard copy of all contract required performance measurement testing shall also be provided.
5. Materials Approval. The material approval letter. A hard copy shall also be provided.
6. Manuals. Operation and service manuals of the signal controller and associated control equipment. One hard copy shall also be provided.
7. Cabinet Wiring Diagram and Cable Logs. Five (5) hard copies 11" x 17" of the cabinet wiring diagrams shall be provided along with electronic pdf and dgn files of the cabinet wiring diagram. Five hard copies of the cable logs and electronic excel files shall be provided with cable #, number of conductors and spares, connected device/signal head and intersection location.
8. Controller Programming Settings. The traffic signal controller's timings; backup timings; coordination splits, offsets, and cycles; TBC Time of Day, Week and Year Programs; Traffic Responsive Program, Detector Phase Assignment, Type and Detector Switching; and any other functions programmable from the keyboard. The controller manufacturer shall also supply a printed form, not to exceed 11" x 17" for recording that data noted above. The form shall include a location, date, manufacturer's name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.
9. Warrantees and Guarantees. All manufacturer and contractor warrantees and guarantees required by Article 801.14.
10. GPS coordinate of traffic signal equipment as describe in the Record Drawings section herein.

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

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

All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Electrical Maintenance Contractor to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of $500 per month per incident.

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

Record Drawings.

The requirements listed for Electrical Installation shall apply for Traffic Signal Installations in Article 801.16. Revise the 2nd paragraph of Article 801.16 of the Standard Specifications to read:

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

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

As part of the record drawings, the Contractor shall inventory all traffic signal equipment, new or existing, on the project and record information in an Excel spreadsheet. The inventory shall include equipment type, model numbers, software manufacturer and version and quantities.

Add the following to Article 801.16 of the Standard Specifications:

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

- All Mast Arm Poles and Posts
- Traffic Signal Wood Poles
- Rail Road Bungalow
- UPS
- Handholes
- Conduit roadway crossings
- Controller Cabinets
- Communication Cabinets
- Electric Service Disconnect locations
- CCTV Camera installations
- Fiber Optic Splice Locations
- Conduit Crossings

Datum to be used shall be North American 1983.

Data shall be provided electronically and in print form. The electronic format shall be compatible with MS Excel. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

- File shall be named: TSXXX-YY-MM-DD (i.e. TS22157_15-01-01)
- Each intersection shall have its own file
- Row 1 should have the location name (i.e. IL 31 @ Klausen)
- Row 2 is blank
- Row 3 is the headers for the columns
- Row 4 starts the data
- Column A (Date) – should be in the following format: MM/DD/YYYY
- Column B (Item) – as shown in the table below
- Column C (Description) – as shown in the table below

- Column D and E (GPS Data) – should be in decimal form, per the IDOT special provisions

Examples:

Date	Item	Description	Latitude	Longitude
01/01/2015	MP (Mast Arm Pole)	NEQ, NB, Dual, Combination Pole	41.580493	-87.793378
01/01/2015	HH (Handhole)	Heavy Duty, Fiber, Intersection, Double	41.558532	-87.792571
01/01/2015	ES (Electrical Service)	Ground mount, Pole mount	41.765532	-87.543571
01/01/2015	CC (Controller Cabinet)		41.602248	-87.794053
01/01/2015	RSC (Rigid Steel Crossing)	IL 31 east side crossing south leg to center HH at Klausen	41.611111	-87.790222
01/01/2015	PTZ (PTZ)	NEQ extension pole	41.593434	-87.769876
01/01/2015	POST (Post)		41.651848	-87.762053
01/01/2015	MCC (Master Controller Cabinet)		41.584593	-87.793378
01/01/2015	COMC (Communication Cabinet)		41.584600	-87.793432
01/01/2015	BBS (Battery Backup System)		41.558532	-87.792571
01/01/2015	CNCR (Conduit Crossing)	4-inch IL 31 n/o of Klausen	41.588888	-87.794440

Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 1 foot. Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified.

Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have a minimum 1 foot accuracy after post processing.

GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years."

Delete the last sentence of the 3rd paragraph of Article 801.16.

Locating Underground Facilities.
Revise Section 803 to the Standard Specifications to read:

IDOT traffic signal facilities are not part of any of the one-call locating service such as J.U.L.I.E or Digger.

If this Contract requires the services of an Electrical Contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT electrical facilities prior to performing any work. If this Contract does not require the services of an Electrical Contractor, the Contractor may request one free locate for existing IDOT electrical facilities from the District One Electrical Maintenance Contractor prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

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

Restoration of Work Area.
Add the following article to Section 801 of the Standard Specifications:

801.17 Restoration of work area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

Bagging Signal Heads.

Light tan colored traffic and pedestrian signal reusable covers shall be used to cover dark/un-energized signal sections and visors. Covers shall be made of outdoor fabric with urethane coating for repelling water, have elastic fully sewn around the cover ends for a tight fit over the visor, and have a minimum of two straps with buckles to secure the cover to the backplate. A center mesh strip allows viewing without removal for signal status testing purposes. Covers shall include a message indicating the signal is not in service.

MAST ARM SIGN PANELS
Effective: May 22, 2002
Revised: July 1, 2015
720.01TS

Add the following to Article 720.02 of the Standard Specifications:

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

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM
Effective: May 22, 2002
Revised: July 1, 2015
800.03TS

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

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

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

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

After the signal improvements are completed, the signal shall be re-optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer discs, copies of computer simulation files for the existing optimized system and a timing database will be made for the Consultant. The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) LEVEL I Re-Optimization

1. The following tasks are associated with LEVEL I Re-Optimization.
   a. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system.
   b. Proposed signal timing plan for the modified intersection(s) shall be forwarded to IDOT for review prior to implementation.
   c. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations. The consultant shall respond to IDOT comments and public complaints for a minimum period of 60 days from date of timing plan implementation.

2. The following deliverables shall be provided for LEVEL I Re-Optimization.
   a. Consultant shall furnish to IDOT a cover letter describing the extent of the re-optimization work performed.
   b. Consultant shall furnish an updated intersection graphic display for the subject intersection to IDOT and to IDOT's Traffic Signal Maintenance Contractor.

(b) LEVEL II Re-Optimization

1. In addition to the requirements described in the LEVEL I Re-Optimization above, the following

tasks are associated with LEVEL II Re-Optimization.

a. Traffic counts shall be taken at the subject intersection(s) after the traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday and on a Saturday and/or Sunday, as directed by the Engineer, to account for special traffic generators such as shopping centers, educational institutes and special event facilities. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.
b. As necessary, the intersection(s) shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.
c. Traffic responsive program operation shall be evaluated to verify proper pattern selection and lack of oscillation and a report of the operation shall be provided to IDOT.

2. The following deliverables shall be provided for LEVEL II Re-Optimization.
   a. Consultant shall furnish to IDOT one (1) copy of a technical memorandum for the optimized system. The technical memorandum shall include the following elements:
      (1) Brief description of the project
      (2) Printed copies of the analysis output from Synchro (or other appropriate, approved optimization software file)
      (3) Printed copies of the traffic counts conducted at the subject intersection
   b. Consultant shall furnish to IDOT two (2) CDs for the optimized system. The CDs shall include the following elements:
      (1) Electronic copy of the technical memorandum in PDF format
      (2) Revised Synchro files (or other appropriate, approved optimization software file) including the new signal and the rest of the signals in the closed loop system
      (3) Traffic counts conducted at the subject intersection(s)
      (4) New or updated intersection(s) graphic display file for the subject intersection(s)
      (5) The CD shall be labeled with the IDOT system number and master location, as well as the submittal date and the consultant logo. The CD case shall include a clearly readable label displaying the same information securely affixed to the side and front.

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

GROUNDING OF TRAFFIC SIGNAL SYSTEMS
Effective: May 22, 2002
Revised: July 1, 2015
806.01TS

Revise Section 806 of the Standard Specifications to read:

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

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

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

(a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.

(b) The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications.

1. Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.

2. Equipment grounding conductor*s* shall be bonded, using a UL Listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers, conduits, and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A UL listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points. Conduit grounding bushings shall be installed at all conduit terminations including spare or empty conduits.

3. All metallic and non-metallic raceways shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.

4. Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.

(c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, UL listed pressure connectors, and UL listed clamps .

COILABLE NON-METALLIC CONDUIT
Effective: May 22, 2002
Revised: July 1, 2015
810.01TS

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

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

Add the following to Article 810.03 of the Standard Specifications:

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

Add the following to Article 811.03 of the Standard Specifications:

On temporary traffic signal installations with detector loops, CNC meeting the requirements of NEC Article

353 shall be used for detector loop raceways from the saw-cut to 10 feet (3m) up the wood pole, unless otherwise shown on the plans

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

UNDERGROUND RACEWAYS
Effective: May 22, 2002
Revised: July 1, 2015
810.02TS

Revise Article 810.04 of the Standard Specifications to read:

> "Installation. All underground conduits shall have a minimum depth of 30-inches (700 mm) below the finished grade."

Add the following to Article 810.04 of the Standard Specifications:

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

Add the following to Article 810.04 of the Standard Specifications:

> "All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum or 300 mm (12") or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped.
>
> The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap.
>
> The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125") thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring."

ROD AND CLEAN EXISTING CONDUIT
Effective: January 1, 2015
Revised: July 1, 2015
810.03TS

Description.
This work shall consist of inserting a duct rod or electrical fish rod or tape of sufficient length and rigidity into an electrical conduit opening in one electrical handhole, and pushing the said rod through the conduit to emerge at the next or subsequent handhole in the conduit system at the location(s) shown on the plans. The duct rod may be inserted and removed by any standard construction method which causes no damage to the conduit. The size of the conduit may vary, but there shall be no differentiation in cost for the size of the conduit.

The conduit which is to be rodded and cleaned may exist with various amounts of standing water in the handholes to drain the conduit and to afford compatible working conditions for the installation of the duct rods and/or cables. Pumping of handholes shall be included with the work of rodding and cleaning of the conduit.

Any handhole which, in the opinion of the Engineer contains excessive debris, dirt or other materials to the extent that conduit rodding and cleaning is not feasible, shall be cleaned at the Engineer's order and payment approval as a separate pay item.

Prior to removal of the duct rod, a duct cleaning attachment such as a properly sized wire brush or cleaning mandrel shall be attached to the duct rod, which by removal of the duct rod shall be pulled through the conduit to remove sand, grit, or other light obstructions from the duct to provide a clean, clear passage for the installation of cable. Whenever the installation of cables is not performed as an adjunct to or immediately following the cleaning of the duct, a light weight pulling line such as a 1/8" polyethylene line or conduit measuring tape shall be placed and shall remain in the conduit to facilitate future work. When great difficulty of either inserting the duct rod or removal of the cleaning mandrel is encountered, the duct may require further cleaning by use of a compressed air gun, or a low pressure water hose. In the case of a broken conduit, the conduit must be excavated and repaired. The existence and location of breaks in the conduit may be determined by rodding, but the excavation and repair work required will be paid for separately.

This work shall be measured per lineal foot for each conduit cleaned. Measurements shall be made from point to point horizontally. No vertical rises shall count in the measurement.

Basis of Payment.
This work shall be paid for at the contract unit price per lineal foot for ROD AND CLEAN EXISTING CONDUIT for the installation of new electric cables in existing conduits. Such price shall include the furnishing of all necessary tools, equipment, and materials required to prepare a conduit for the installation of cable.

HANDHOLES
Effective: January 01, 2002
Revised: July 1, 2015
814.01TS

Description.
Add the following to Section 814 of the Standard Specifications:

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

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 1/2 inch (13 mm) diameter with two 90 degree bends and extend into the handhole at least 6 inches (152 mm). Hooks shall be placed a minimum of 12 inches (305 mm) below the lid or lower if additional space is required.

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

The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters.

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

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

Add the following to Article 814.03 of the Standard Specifications:

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

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

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

The minimum wall thickness for heavy duty hand holes shall be 12 inches (305mm).

Precast Round Handholes.
All precast handholes shall be concrete, with inside dimensions of 30 inches (762mm) diameter. Frames and covers shall have a minimum opening of 26 inches (660mm) and no larger than the inside diameter of the handhole.

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

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

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

Materials.
Add the following to Section 1042 of the Standard Specifications:

"1042.17 Precast Concrete Handholes. Precast concrete handholes shall be according to Articles 1042.03(a)(c)(d)(e)."

GROUNDING CABLE
Effective: May 22, 2002
Revised: July 1, 2015
817.01TS

The cable shall meet the requirements of Section 817 of the "Standard Specifications," except for the following:

Add the following to Article 817.02 (b) of the Standard Specifications:

Unless otherwise noted on the Plans, traffic signal grounding conductor shall be one conductor, #6 gauge copper, with a green color coded XLP jacket.

The traffic signal grounding conductor shall be bonded, using a UL Listed grounding connector to all proposed and existing traffic signal mast arm poles and traffic/pedestrian signal posts, including push button posts. The grounding conductor shall be bonded to all proposed and existing pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system and noted herein and detailed on the plans. The grounding conductor shall be bonded to conduit terminations using rated grounding bushings. Bonding to existing handhole frames and covers shall be paid for separately.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment.
Grounding cable shall be measured in place for payment in foot (meter). Payment shall be at the contract unit price for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C, which price includes all associated labor and material including grounding clamps, splicing, exothermic welds, grounding connectors, conduit grounding bushings, and other hardware.

FIBER OPTIC TRACER CABLE
Effective: May 22, 2002
Revised: July 1, 2015
817.02TS

The cable shall meet the requirements of Section 817 of the Standard Specifications, except for the following:

Add the following to Article 817.03 of the Standard Specifications:

In order to trace the fiber optic cable after installation, the tracer cable shall be installed in the same conduit as the fiber optic cable in locations shown on the plans. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable will be allowed to be spliced at handholes only. The tracer cable splice shall use a Western Union Splice soldered with resin core flux and shall be soldered using a soldering iron. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. All exposed surfaces of the solder shall be smooth. The splice shall be covered with a black shrink tube meeting UL 224 guidelines, Type V and rated 600V, minimum length 4 inches (100 mm) and with a minimum 1 inch (25 mm) coverage over the XLP insulation, underwater grade.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment.
The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per foot (meter), which price shall include all associated labor and material for installation.

MAINTENANCE OF EXISTING TRAFFIC SIGNAL AND FLASHING BEACON INSTALLATION
Effective: May 22, 2002
Revised: July 1, 2015
850.01TS

General.

1. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the Contract or any portion thereof. If Contract work is started prior to a traffic signal inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection.

2. The Contractor shall have electricians with IMSA Level II certification on staff to provide signal maintenance. A copy of the certification shall be immediately available upon request of the Engineer.

3. This item shall include maintenance of all traffic signal equipment and other connected and related equipment such as flashing beacons, emergency vehicle pre-emption equipment, master controllers, uninterruptable power supply (UPS and batteries), PTZ cameras, vehicle detection, handholes, lighted signs, telephone service installations, communication cables, conduits to adjacent intersections, and other traffic signal equipment.

4. Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers, radios and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.

5. Maintenance shall not include Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, or peripheral equipment. This equipment is operated and maintained by the local municipality and should be de-activated while on contractor maintenance.

6. The energy charges for the operation of the traffic signal installation shall be paid for by the Contractor.

Maintenance.

1. The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. The Contractor shall check signal system communications and phone lines to assure proper operation. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs. Prior to the traffic signal maintenance transfer, the contractor shall supply a detailed maintenance schedule that includes dates, locations, names of electricians providing the required checks and inspections along with any other information requested by the Engineer.

2. The Contractor is advised that the existing and/or span wire traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shut down the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.

3. The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. When the signals operate in flash, the Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

4. The Contractor shall provide the Engineer with 2 (two) 24 hour telephone numbers for the maintenance of the traffic signal installation and for emergency calls by the Engineer.

5. Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of the Standard Specifications and these special provisions.

6. The Contractor shall respond to all emergency calls from the Department or others within one (1) hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work. The Contractor shall be responsible for all of the State's Electrical Maintenance Contractor's costs and liquidated damages of $1000 per day per occurrence. The State's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

7. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

8. Equipment included in this item that is damaged or not operating properly from any cause shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed.

9. Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause, shall be the responsibility of the municipality or the Automatic Traffic Enforcement Company per Permit agreement.

10. The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.

11. The Contractor shall maintain the traffic signal in normal operation during short or long term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power to critical locations shall not be paid for separately but shall be included in the contract.

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

Basis of Payment.
This work will be paid for at the contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION. Each intersection will be paid for separately. Maintenance of a standalone and or not connected flashing beacon shall be paid for at the contract unit price for MAINTENANCE OF EXISITNG FLASHING BEACON INSTALLATION. Each flashing beacon will be paid for separately.

FIBER OPTIC CABLE
Effective: May 22, 2002
Revised: July 1, 2015
871.01TS

Add the following to Article 871.01 of the Standard Specifications:

The Fiber Optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 871.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be 24 Port Fiber Wall Enclosure, unless otherwise indicated on plans. The fiber optic cable shall provide twelve fibers per tube for the amount of fibers called for in the Fiber Optic Cable pay item in the Contract. Fiber Optic cable may be gel filled or have an approved water blocking tape.

Add the following to Article 871.04 of the Standard Specifications:

A minimum of six multimode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled “spare." Fibers not attached to the distribution enclosure shall be capped.. A minimum of 13.0 feet (4m) of extra cable length shall be provided for controller cabinets. The controller cabinet extra cable length shall be stored as directed by the Engineer.

Add the following to Article 871.06 of the Standard Specifications:

The distribution enclosure and all connectors will be included in the cost of the fiber optic cable.

Testing shall be in accordance with Article 801.13(d). Electronic files of OTDR signature traces shall be provided in the Final project documentation with certification from the Contractor that attenuation of each fiber does not exceed 3.5 dB/km nominal at 850nm for multimode fiber and 0.4 bd/km nominal at 1300nm for single mode fiber.

ELECTRIC CABLE
Effective: May 22, 2002
Revised: July 1, 2015
873.01TS

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

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

Service cable may be single or multiple conductor cable.

EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
Effective: January 1, 2013
Revised: July 1, 2015
887.01TS

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

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

TRAFFIC SIGNAL POST
Effective: May 22, 2002
Revised: July 01, 2015
875.01TS

Add the following to Article 1077.01 (c) of the Standard Specifications:

Washers for post bases shall be the same size or larger than the nut.

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

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

LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAMMED LED SIGNAL HEAD
Effective: May 22, 2002
Revised: July 1, 2015
880.01TS

Materials.
Add the following to Section 1078 of the Standard Specifications:

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

2. The proposed independent testing facility shall be approved by IDOT District One. Independent testing must include a minimum of two (2) randomly selected modules of each type of module (i.e. ball, arrow, pedestrian, etc.) used in the District and include as a minimum Luminous Intensity and Chromaticity tests. However, complete module performance verification testing may be required by the Engineer to assure the accuracy of the vendor's published data and previous test results. An IDOT representative will select sample modules from the local warehouse and mark the modules for testing. Independent test results shall meet current ITE standards and vendor's published data. Any module failures shall require retesting of the module type. All costs

associated with the selection of sample modules, testing, reporting, and retesting, if applicable, shall be the responsibility of the LED module vendor and not be a cost to this contract.

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

4. The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects within the first 7 years from the date of traffic signal TURN-ON. LED signal modules which exhibit luminous intensities less than the minimum values specified in Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTSCH], or applicable successor ITE specifications, or show signs of entrance of moisture or contaminants within the first 7 years of the date of traffic signal TURN-ON shall be replaced or repaired. The vendor's written warranty for the LED signal modules shall be dated, signed by a vendor's representative and included in the product submittal to the State.

(a) Physical and Mechanical Requirements

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

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

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

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

5. The lens of the module shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face. Polymeric lens shall provide a surface coating or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.

6. The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.

7. Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be 1 inch (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 inch (12.7mm) letters next to the symbol.

(b) Photometric Requirements

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

(c) Electrical

1. Maximum power consumption for LED modules is per Table 2.

2. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.

3. The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).

4. When a current of 20 mA AC (or less) is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.

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

6. LED arrows shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

(d) Retrofit Traffic Signal Module

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

2. Retrofit modules can be manufactured under this specification for the following faces:

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

3. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.

4. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).

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

6. Electrical conductors for modules, including Retrofit modules, shall be 39.4 inches (1m) in length, with quick disconnect terminals attached.

7. The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.

(e) The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.

1. The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) or applicable successor ITE specifications for arrow indications.

2. The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.

(f) The following specification requirement applies to the 12 inch (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.

1. The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.

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

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

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

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

PEDESTRIAN PUSH-BUTTON POST
Effective: May 22, 2002
Revised: July 01, 2015
888.01TS

Revise the first sentence of Article 1077.02 (a) of the Standard Specifications to read:

The steel post shall be according to Article 1077.01. Washers for post bases shall be the same size or larger than the nut.

Revise the first sentence of Article 1077.02 (a) of the Standard Specifications to read:

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

MAST ARM ASSEMBLY AND POLE
Effective: May 22, 2002
Revised: July 01, 2015
877.01TS

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

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

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

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

CONCRETE FOUNDATIONS
Effective: May 22, 2002
Revised: July 01, 2015
878.01TS

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. (300 mm) at the threaded end.

Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

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

The price shall include a concrete apron in front of the cabinet and UPS as shown in the plans or as directed by the engineer.

LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD
Effective: May 22, 2002
Revised: July 1, 2015
880.01TS

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

No mixing of different types of pedestrian traffic signals or displays will be permitted.

Add the following to Article 881.03 of the Standard Specifications:

(a) Pedestrian Countdown Signal Heads.

(1) Pedestrian Countdown Signal Heads shall not be installed at signalized intersections where traffic signals and railroad warning devices are interconnected.

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

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

Materials.
Add the following to Article 1078.02 of the Standard Specifications:

General.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Add the following to Article 881.04 of the Standard Specifications:

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

TRAFFIC SIGNAL BACKPLATE
Effective: May 22, 2002
Revised: July 1, 2015
882.01TS

Delete 1st sentence of Article 1078.03 of the Standard Specifications and add "All backplates shall be louvered, formed ABS plastic".

Add the following to the third paragraph of Article 1078.03 of the Standard Specifications. The retroreflective backplate shall not contain louvers.

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

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

When retro reflective sheeting is specified, it shall be Type ZZ sheeting according to Article 1091.03 and applied in preferred orientation for the maximum angularity according to the vendor's recommendations. The retroreflective sheeting shall be installed under a controlled environment at the vendor/equipment supplier before shipment to the contractor. The formed plastic backplate shall be prepared and cleaned, following recommendations of the retroreflective sheeting manufacturer.

DETECTOR LOOP
Effective: May 22, 2002
Revised: January 5, 2016
886.01TS

Procedure.
A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall mark the proposed loop locations and contact the Area Traffic Signal Maintenance and Operations Engineer (847) 705-4424 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the Portland cement concrete surface, using the same notification process as above.

Installation.
Revise Article 886.04 of the Standard Specifications to read:
Loop detectors shall be installed according to the requirements of the "District One Standard Traffic Signal Design Details." Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw-cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the 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.

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.

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

(b) Loop sealant shall be two-component thixotropic chemically cured polyurethane from an approved vendor. The sealant shall be installed 1/8 inch (3 mm) below the pavement surface. If installed above the surface the excess shall be removed immediately.

(c) Preformed. This work shall consist of furnishing and installing a rubberized or cross linked polyethylene heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:

(d) Preformed detector loops shall be installed in new pavement constructed of Portland cement concrete using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall be extended to a temporary protective enclosure near the proposed handhole location. The protective enclosure shall provide sufficient protection from other construction activities and may be buried for additional protection.

(e) Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. CNC, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.

(f) Preformed detector loops shall be factory assembled with ends capped and sealed against moisture and other contaminants. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16 inch (17.2 mm) outside diameter (minimum), 3/8 inch (9.5 mm) inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kPa) internal pressure rating or a similarly sized XLPE cable jacket. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. For XLPE jacketed preformed loops, all splice connections shall be soldered, sealed, and tested before being sealed in a high impact glass impregnated plastic splice enclosure. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire. The preformed loops shall be constructed to allow a minimum of 6.5 feet of extra cable in the handhole.

Method of Measurement.
Add the following to Article 886.05 of the Standard Specifications:

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

Basis of Payment.
This work shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I or

PREFORMED DETECTOR LOOP as specified in the plans, which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

EMERGENCY VEHICLE PRIORITY SYSTEM
Effective: May 22, 2002
Revised: July 1, 2015
887.01TS

Revise Section 887 of the Standard Specifications to read:

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

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

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

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

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

CONFIRMATION BEACON
Effective: January 1, 2002
Revised: July 1, 2015
887.04TS

This item shall consist of furnishing and installing a Traffic Signal Emergency Confirmation Beacon (single channel or dual channel) at the locations specified on the plans and as described as follows for intersections which have existing emergency preemption systems previously installed.

Confirmation Beacon, Single Channel - Where the light detector is used to detect a single direction of traffic, one LED lamp for only that direction shall be provided. In cases where the detector covers opposing directions of traffic and has a single output, a separate lamp for each direction shall be provided but they shall have identical indications.

Confirmation Beacon, Dual Channel - A separate LED lamp with appropriate separate indications for each direction shall be provided.

It shall be the Contractor's responsibility to verify the existing brand of emergency vehicle equipment at the intersection and the confirmation beacons must be completely compatible with all existing components. The Confirmation Beacon shall consist of a 6 watt Par 38 LED flood lamp with a 30 degree light spread, or a 7 watt Par 30 LED flood lamp with a 15 degree or greater spread, maximum 7 watt energy consumption at 120V, and a 2,000 hour warranty for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. No new holes may be drilled into signal poles, mast arms, or posts. The Confirmation Beacon shall be mounted to the existing light detector hardware as shown on the mounting detail in the plans. In order to maintain uniformity between communities, the Confirmation Beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signalized by a flashing indication at the rate specified by Section 4L.01 of the "Manual on Uniform Traffic Control Devices," and other applicable sections of future editions. The stopped pre-empted movements shall be signalized by a continuous indication.

Any modification required to the existing light detector installation to meet the requirements of the mounting detail shown in the plans shall be included in this item.

Basis of Payment.
This work will be paid for at the contract unit price per each for CONFIRMATION BEACON.

PEDESTRIAN PUSH-BUTTON
Effective: May 22, 2002
Revised: July 1, 2015
888.01TS

Description.
Revise Article 888.01 of the Standard Specifications to read:

This work shall consist of furnishing and installing a latching (single call) or non-latching (dual call) pedestrian push-button and a regulatory pedestrian instruction sign according to MUTCD, sign series R10-3e 9" x 15" sign with arrow(s) for a count-down pedestrian signal. The pedestrian station sign size without count-down pedestrian signals shall accommodate a MUTCD sign series R10-3b or R10-3d 9" x 12" sign with arrow(s).

Installation.
Add the following to Article 888.03 of the Standard Specifications:

A mounting bracket and/or extension shall be used to assure proper orientation when two pedestrian push buttons are required for one post. The price of the bracket and/or extension shall be included in the cost of the pedestrian push button. The contractor is not allowed to install a push-button assembly with the sign below the push-button in order to meet mounting requirements.

Materials.
Revise Article 1074.02(a) of the Standard Specifications to read:

The pedestrian push-button housing shall be constructed of aluminum alloy according to ASTM B 308 6061-T6 and powder coated yellow, unless otherwise noted on the plans. The housing shall be furnished with suitable mounting hardware.

Revise Article 1074.02(e) of the Standard Specifications to read:

Stations shall be designed to be mounted to a post, mast arm pole or wood pole. The station shall be aluminum and shall accept a 3 inch (75mm) round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD, sign series R10-3e 9" x 15" sign with arrow(s) for a count-down pedestrian signal. The pedestrian station size without count-down pedestrian signals shall accommodate a MUTCD sign series R10-3b or R10-3d 9" x 12" sign with arrow(s).

Add the following to Article 1074.02 of the Standard Specifications:

(f) Location. Pedestrian push-buttons and stations shall be mounted to a post, mast arm pole or wood pole as shown on the plans and shall be fully ADA accessible from a paved or concrete surface. See the District's Detail sheets for orientation and mounting details.

Basis of Payment.
Revise Article 888.04 of the Standard Specifications to read:

This work will be paid for at the contract unit price per each for PEDESTRIAN PUSH-BUTTON or PEDESTRIAN PUSH-BUTTON, NON-LATCHING.

TEMPORARY TRAFFIC SIGNAL INSTALLATION
Effective: May 22, 2002
Revised: January 1, 2017
890.01TS

Revise Section 890 of the Standard Specifications to read:

Description.
This work shall consist of furnishing, installing, maintaining, and removing a temporary traffic signal installation as shown on the plans, including but not limited to temporary signal heads, emergency vehicle priority systems, interconnect, vehicle detectors, uninterruptable power supply, and signing. Temporary traffic signal controllers and cabinets interconnected to railroad traffic control devices shall be new. When temporary traffic signals will be operating within a county or local agency Traffic Management System, the equipment must be NTCIP compliant and compatible with the current operating requirements of the Traffic Management System.

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

Construction Requirements.

(a) Controllers.

1. Only controllers supplied by one of the District approved closed loop equipment supplier will be approved for use at temporary signal locations. All controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software approved by IDOT District 1, installed in NEMA TS2 cabinets with 8 phase back panels, capable of supplying 255 seconds of cycle length and individual phase length settings up to 99 seconds. On projects with one lane open and two way traffic flow, such as bridge deck repairs, the temporary signal controller shall be capable of providing an adjustable all red clearance setting of up to 30 seconds in length. All controllers used for temporary traffic signals shall meet or exceed the requirements of Section 857 of the Standard Specifications with regards to internal time base coordination and preemption. All railroad interconnected temporary controllers and cabinets shall be new and shall satisfy the requirements of Article 857.02 of the Standard Specifications and as modified herein.

2. Only control equipment, including controller cabinet and peripheral equipment, supplied by one of the District approved closed loop equipment suppliers will be approved for use at temporary traffic signal locations. All control equipment for the temporary traffic signal(s) shall be furnished by the Contractor unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be the same manufacturer brand and model number with the latest version software installed at the time of the signal TURN-ON.

(b) Cabinets. All temporary traffic signal cabinets shall have a closed bottom made of aluminum alloy. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust and insect-proof seal. The bottom shall provide a minimum of two (2) 4 inch (100 mm) diameter holes to run the electric cables through. The 4 inch (100 mm) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.

(c) Grounding. Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 806 of the Standard Specifications and shall meet the requirements of the 806.01TS GROUNDING OF TRAFFIC SIGNAL SYSTEMS special provision.

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

(e) Interconnect.

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

2. The existing system interconnect and phone lines are to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. The interconnect, including any required fiber splices and terminations, shall be installed into the temporary

controller cabinet as per the notes or details on the plans. All labor and equipment required to install and maintain the existing interconnect as part of the Temporary Traffic Signal Installation shall be included in the cost of TEMPORARY TRAFFIC SIGNAL INSTALLATION. When shown in the plans, temporary traffic signal interconnect equipment shall be furnished and installed. The temporary traffic signal interconnect shall maintain interconnect communications throughout the entire signal system for the duration of the project. Any temporary signal within an existing closed loop traffic signal system shall be interconnected to that system using similar brand control equipment at no additional cost to the contract.

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

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

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

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

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

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

(f) Emergency Vehicle Pre-Emption. All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 hz ±0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District. All labor and material required to install and maintain the Emergency Vehicle Preemption installation shall be included in the item Temporary Traffic Signal Installation.

(g) Vehicle Detection. All temporary traffic signal installations shall have vehicular detection

installed at all approaches of the intersection and as directed by the Engineer. Pedestrian push buttons shall be provided for all pedestrian signal heads/phases as directed by the Engineer. Microwave vehicle sensors or video vehicle detection system shall be approved by IDOT prior to Contractor furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the microwave vehicle sensor or video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the microwave vehicle sensor or video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. An equipment supplier shall be present and assist the contractor in setting up and maintaining the microwave vehicle sensor or video vehicle detection system. An in-cabinet video monitor shall be provided with all video vehicle detection systems and shall be included in the item Temporary Traffic Signal Installation.

(h) Uninterruptable Power Supply. All temporary traffic signal installations shall have Uninterruptable Power Supply (UPS). The UPS cabinet shall be mounted to the temporary traffic signal cabinet and shall be according to the applicable portions of Section 862 of the Standard Specifications and as modified in 862.01TS UNITERRUPTABLE POWER SUPPLY, SPECIAL Special Provision.

(i) Signs. All existing street name and intersection regulatory signs shall be removed from existing poles and relocated to the temporary signal span wire. If new mast arm assembly and pole(s) and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost. Any intersection regulatory signs that are required for the temporary traffic signal shall be provided as shown on the plans or as directed by the Engineer. Relocation, removing, bagging and installing the regulatory signs for the various construction stages shall be provided as shown on the plans or as directed by the Engineer. If Illuminated Street Name Signs exist they shall be taken down and stored by the contractor and reflecting street name signs shall be installed on the temporary traffic signal installation.

(j) Energy Charges. The electrical utility energy charges for the operation of the temporary traffic signal installation shall be paid for by others if the installation replaces an existing signal. Otherwise charges shall be paid for under 109.05 of the Standard Specifications.

(k) Maintenance. Maintenance shall meet the requirements of the Standard Specifications and 850.01TS MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION Special Provisions. Maintenance of temporary signals and of the existing signals shall be included in the cost of the TEMPORARY TRAFFIC SIGNAL INSTALLATION pay item. When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as he begins any physical work on the Contract or any portion thereof. In addition, a minimum of seven (7) days prior to assuming maintenance of the existing traffic signal installation(s) under this Contract, the Contractor shall request that the Resident Engineer contact the Bureau of Traffic Operations (847) 705-4424 for an inspection of the installation(s).

(l) Temporary Traffic Signals for Bridge Projects. Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, Special Provisions and any plans for Bridge Temporary Traffic Signals included in the plans. The installation shall meet the Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION specification. In addition all electric cable shall be aerially suspended, at a minimum height of 18 feet (5.5m) on temporary wood poles (Class 5 or better) of 45 feet (13.7 m) minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole as shown in the plans, or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection system may be used in place of detector loops as

approved by the Engineer.

(m) Temporary Portable Traffic Signal for Bridge Projects.

1. The controller and cabinet shall be NEMA type designed for NEMA TS2 Type 1 operation. Controller and LED signal displays shall meet the applicable Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION special provision.

2. Work shall be according to Article 701.18(b) of the Standard Specifications except as noted herein.

3. General.

    a. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of 12 days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.

    b. All signal heads located over the travel lane shall be mounted at a minimum height of 17 feet (5m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 feet (2.5m) from the bottom of the signal back plate to the top of the adjacent travel lane surface.

    c. The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.

    d. As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with microwave sensors or other approved methods of vehicle detection and traffic actuation.

    e. All portable traffic signal units shall be interconnected using hardwire communication cable. Radio communication equipment may be used only with the approval of the Engineer. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.

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

Basis of Payment.
This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION, the price of which shall include all costs for the

modifications required for traffic staging, changes in signal phasing as required in the Contract plans, microwave vehicle sensors, video vehicle detection system, any maintenance or adjustment to the microwave vehicle sensors/video vehicle detection system, the temporary wireless interconnect system, temporary fiber optic interconnect system, all material required, the installation and complete removal of the temporary traffic signal, and any changes required by the Engineer. Each intersection will be paid for separately.

TEMPORARY TRAFFIC SIGNAL TIMING
Effective: May 22, 2002
Revised: July 1, 2015
890.02TS

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

All timings and adjustments necessary for this work shall be performed by an approved Consultant who has previous experience in optimizing Closed Loop Traffic signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants.

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMING.

(a) Consultant shall attend temporary traffic signal inspection (turn-on) and/or detour meeting and conduct on-site implementation of the traffic signal timings.

(b) Consultant shall be responsible for making fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.

(c) Consultant shall provide monthly observation of traffic signal operations in the field.

(d) Consultant shall provide on-site consultation and adjust timings as necessary for construction stage changes, temporary traffic signal phase changes, and any other conditions affecting timing and phasing, including lane closures, detours, and other construction activities.

(e) Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

(f) Return original timing plan once construction is complete.

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

MODIFY EXISTING CONTROLLER CABINET
Effective: May 22, 2002
Revised: July 1, 2015
895.01TS

The work shall consist of modifying an existing controller cabinet as follows:

(a) Uninterruptable Power Supply (UPS). The addition of uninterruptable power supply (UPS) to an

existing controller cabinet could require the relocation of the existing controller cabinet items to allow for the installation of the uninterruptable power supply (UPS) components inside the existing controller cabinet as outlined under Sections 862 and 1074.04 of the Standard Specifications and the wiring of UPS alarms.

(b) Light Emitting Diode (LED) Signal Heads, Light Emitting Diode (LED) Optically Programmed Signal Heads and Light Emitting Diode (LED) Pedestrian Signal Heads. The contractor shall verify that the existing load switches meet the requirements of Section 1074.03(b)(2) of the Standard Specifications and the recommended load requirements of the light emitting diode (LED) signal heads that are being installed at the existing traffic signal. If any of the existing load switches do not meet these requirements, they shall be replaced, as directed by the Engineer.

(c) Light Emitting Diode (LED), Signal Head, Retrofit. The contractor shall verify that the existing load switches meet the requirements of Section 1074.03(b)(2) of the Standard Specifications and the recommended load requirements of light emitting diode (LED) traffic signal modules, pedestrian signal modules, and pedestrian countdown signal modules as specified in the plans. If any of the existing load switches do not meet these requirements, they shall be replaced, as directed by the Engineer.

(d) This item shall include the upgrade of all non-railroad controller software to the latest version available at the time of the signal TURN-ON.

Basis of Payment.
Modifying an existing controller cabinet will be paid for at the contract unit price per each for Modify Existing Controller Cabinet. This shall include all material and labor required to complete the work as described above, the removal and disposal of all items removed from the controller cabinet, as directed by the Engineer. The equipment for the Uninterruptable Power Supply (UPS) and labor to install it in the existing controller cabinet shall be included in the pay item Uninterruptable Power Supply, Special or Uninterruptable Power Supply, Ground Mounted.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
Effective: May 22, 2002
Revised: July 1, 2015
895.02TS

Add the following to Article 895.05 of the Standard Specifications:

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

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

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

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

CONDUIT SPLICE

Description:
This work shall consist of cutting existing conduits and attaching new conduits as shown on the plans.

Construction Requirements:
This pay item shall include necessary work to splice conduit as shown on the plans. This work shall conform to Section 810 of the current "Standard Specifications for Road and Bridge Construction." The existing conduits shall be exposed and cut at the location shown on the plans or as directed by the Engineer. The end of the existing conduits shall be threaded and a threaded coupling used to join the existing conduit to the new conduit. The use of no-thread couplings is unacceptable. A coupler reducer will be required for connection from the proposed 3" conduit to the existing 2 ½" conduit and shall be included in the cost of CONDUIT SPLICE.

Basis of Payment:
This work will be paid for at the unit price per each for CONDUIT SPLICE.

REMOVE FIBER OPTIC CABLE FROM CONDUIT

Add the following to Article 895.05 of the Standard Specifications:

The fiber optic cable which is to be removed and is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor's expense.

Basis of Payment:
This work will be paid for at the unit price per foot for REMOVE FIBER OPTIC CABLE FROM CONDUIT.

GENERAL ELECTRICAL REQUIREMENTS
Effective: April 1, 2016

This special provision replaces Articles 801.01 – 801.07, 801.09 – 801-16 of the Standard Specifications.

Definition. Codes, standards, and industry specifications cited for electrical work shall be by definition the latest adopted version thereof, unless indicated otherwise.

Materials by definition shall include electrical equipment, fittings, devices, motors, appliances, fixtures, apparatus, all hardware and appurtenances, and the like, used as part of, or in connection with, electrical

grounded. Good ground continuity throughout the electrical system shall be assured, even though every detail of the requirements is not specified or shown. Electrical circuits shall have a continuous insulated equipment grounding conductor. When metallic conduit is used, it shall be bonded to the equipment grounding conductor, but shall not be used as the equipment grounding conductor.

Detector loop lead-in circuits, circuits under 50 volts, and runs of fiber optic cable will not require an equipment grounding conductor.

Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point. After the connection is completed, the paint system shall be repaired to the satisfaction of the Engineer.

Bonding of all boxes and other metallic enclosures throughout the wiring system to the equipment grounding conductor shall be made using a splice and pigtail connection. Mechanical connectors shall have a serrated washer at the contact surface.

All connections to structural steel or fencing shall be made with exothermic welds. Care shall be taken not to weaken load carrying members. Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate a mechanical connection. The epoxy coating shall be repaired to the satisfaction of the Engineer. Where connections are made to insulated conductors, the connection shall be wrapped with at least four layers of electrical tape extended 6 in. (150 mm) onto the conductor insulation.

Submittals. At the preconstruction meeting, the Contractor shall submit a written listing of manufacturers for all major electrical and mechanical items. The list of manufacturers shall be binding, except by written request from the Contractor and approval by the Engineer. The request shall include acceptable reasons and documentation for the change.

Major items shall include, but not limited to the following:

Type of Work (discipline)	Item
All Electrical Work	Electric Service Metering Emergency Standby System Transformers Cable Unit Duct Splices Conduit Surge Suppression System
Lighting	Tower Pole Luminaire Foundation Breakaway Device Controllers Control Cabinet and Peripherals
ITS	Controller Cabinet and Peripherals CCTV Cameras Camera Structures Ethernet Switches Detectors Detector Loop Fiber Optic Cable

Within 30 calendar days after contract execution, the Contractor shall submit, for approval, one copy each of the manufacturer's product data (for standard products and components) and detailed shop drawings (for fabricated items). Submittals for the materials for each individual pay item shall be complete in every respect. Submittals which include multiple pay items shall have all submittal material for each item or group of items covered by a particular specification, grouped together and the applicable pay item identified. Various submittals shall, when taken together, form a complete coordinated package. A partial submittal will be returned without review unless prior written permission is obtained from the Engineer.

The submittal shall be properly identified by route, section, county, and contract number.

The Contractor shall have reviewed the submittal material and affixed his/her stamp of approval, with date and signature, for each individual item. In case of subcontractor submittal, both the subcontractor and the Contractor shall review, sign, and stamp their approval on the submittal.

Illegible print, incompleteness, inaccuracy, or lack of coordination will be grounds for rejection.

Items from multiple disciplines shall not be combined on a single submittal and transmittal. Items for lighting, signals, surveillance and CCTV must be in separate submittals since they may be reviewed by various personnel in various locations.

The Engineer will review the submittals for conformance with the design concept of the project according to Article 105.04 and the following. The Engineer will stamp the drawings indicating their status as "Approved", "Approved as Noted", "Disapproved", or "Information Only". Since the Engineer's review is for conformance with the design concept only, it shall be the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, or layout drawings by the Engineer's approval thereof. The Contractor shall still be in full compliance with contract and specification requirements.

All submitted items reviewed and marked "Disapproved" or "Approved as Noted" shall be resubmitted by the Contractor in their entirety, unless otherwise indicated within the submittal comments.

Work shall not begin until the Engineer has approved the submittal. Material installed prior to approval by the Engineer, will be subject to removal and replacement at no additional cost to the Department.

Unless otherwise approved by the Engineer, all of the above items shall be submitted to the Engineer at the same time. Each item shall be properly identified by route, section, and contract number.

Certifications. When certifications are specified and are available prior to material manufacture, the certification shall be included in the submittal information. When specified and only available after manufacture, the submittal shall include a statement of intent to furnish certification. All certificates shall be complete with all appropriate test dates and data.

Authorized Project Delay. See Article 801.08

Maintenance transfer and Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction

period.

Establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The party responsible for maintenance of any existing lighting and/or traffic control systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the State. A project may involve multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 304.8 mm (one (1) foot) to either side.. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. Note that the contractor shall be entitled to only one request for location marking of existing systems and that multiple requests may only be honored at the contractor's expense. No locates will be made after maintenance is transferred, unless it is at the contractor's expense.

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken. The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record, all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition."

Marking Proposed Locations for Highway Lighting System. The Contractor shall mark or stake the proposed locations of all poles, cabinets, junction boxes, pull boxes, handholes, cable routes, pavement crossings, and other items pertinent to the work. A proposed location inspection by the Engineer shall be requested prior to any excavation, construction, or installation work after all proposed installation locations are marked. Any work installed without location approval is subject to corrective action at no additional cost to the Department.

Inspection of electrical work. Inspection of electrical work shall be according to Article 105.12 and the following.

Before any splice, tap, or electrical connection is covered in handholes, junction boxes, light poles, or other enclosures, the Contractor shall notify and make available such wiring for the Engineer's inspection.

Maintenance and Responsibility During Construction.

Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance of the existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein. Maintenance of lighting systems is specified elsewhere and will be paid for separately

The proposed lighting system must be operational prior to opening the roadway to traffic unless temporary lighting exists which is designed and installed to properly illuminate the roadway.

Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense

and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in service, whether the system has passed final acceptance or not, (such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.

Damage to Electrical Systems. Should damage occur to any existing electrical systems through the Contractor's operations, the Engineer will designate the repairs as emergency or non-emergency in nature.

Emergency repairs shall be made by the Contractor, or as determined by the Engineer, the Department, or its agent. Non-emergency repairs shall be performed by the Contractor within six working days following discovery or notification. All repairs shall be performed in an expeditious manner to assure all electrical systems are operational as soon as possible. The repairs shall be performed at no additional cost to the Department.

Lighting. An outage will be considered an emergency when three or more lights on a circuit or three successive lights are not operational. Knocked down materials, which result in a danger to the motoring public, will be considered an emergency repair.

Temporary aerial multi-conductor cable, with grounded messenger cable, will be permitted if it does not interfere with traffic or other operations, and if the Engineer determines it does not require unacceptable modification to existing installations.

Testing. Before final inspection, the electrical work shall be tested. Tests may be made progressively as parts of the work are completed, or may be made when the work is complete. Tests shall be made in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced. Tests shall include checks of control operation, system voltages, cable insulation, and ground resistance and continuity.

The forms for recording test readings will be available from the Engineer in electronic format. The Contractor shall provide the Engineer with a written report of all test data including the following:

- Voltage Tests
- Amperage Tests
- Insulation Resistance Tests
- Continuity tests
- Detector Loop Tests

Lighting systems. The following tests shall be made.

(1) Voltage Measurements. Voltages in the cabinet from phase to phase and phase to neutral, at no load and at full load, shall be measured and recorded. Voltage readings at the last termination of each circuit shall be measured and recorded.

(2) Insulation Resistance. Insulation resistance to ground of each circuit at the cabinet, with all loads connected, shall be measured and recorded.

On tests of new cable runs, the readings shall exceed 50 megohms for phase and neutral conductors with a connected load over 20 A, and shall exceed 100 megohms for conductors with a connected load of 20 A or less.

On tests of cable runs which include cables which were existing in service prior to this contract, the resistance readings shall be the same or better than the readings recorded at the maintenance transfer at the beginning of the contract. Measurements shall be taken with a megohm meter approved by the Engineer.

(3) Loads. The current of each circuit, phase main, and neutral shall be measured and recorded. The Engineer may direct reasonable circuit rearrangement. The current readings shall be within ten percent of the connected load based on material ratings.

(4) Ground Continuity. Resistance of the system ground as taken from the farthest extension of each circuit run from the controller (i.e. check of equipment ground continuity for each circuit) shall be measured and recorded. Readings shall not exceed 2.0 ohms, regardless of the length of the circuit.

(5) Resistance of Grounding Electrodes. Resistance to ground of all grounding electrodes shall be measured and recorded. Measurements shall be made with a ground tester during dry soil conditions as approved by the Engineer. Resistance to ground shall not exceed 10 ohms.

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

Detector Loops. Before and after permanently securing the loop in the pavement, the resistance, inductance, resistance to ground, and quality factor for each loop and lead-in circuit shall be tested. The loop and lead-in circuit shall have an inductance between 20 and 2500 microhenries. The resistance to ground shall be a minimum of 50 megohms under any conditions of weather or moisture. The quality factor (Q) shall be 5 or greater.

Fiber Optic Systems. Fiber optic testing shall be performed as required in the fiber optic cable special provision and the fiber optic splice special provision.

All test results shall be furnished to the Engineer seven working days before the date the inspection is scheduled.

Contract Guarantee. The Contractor shall provide a written guarantee for all electrical work provided under the contract for a period of six months after the date of acceptance with the following warranties and guarantees.

(a) The manufacturer's standard written warranty for each piece of electrical material or apparatus furnished under the contract. The warranty for light emitting diode (LED) modules, including the maintained minimum luminance, shall cover a minimum of 60 months from the date of delivery.

(b) The Contractor's written guarantee that, for a period of six months after the date of final acceptance of the work, all necessary repairs to or replacement of said warranted material or apparatus for reasons not proven to have been caused by negligence on the part of the user or acts of a third party shall be made by the Contractor at no additional cost to the Department.

(c) The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of six months after final acceptance of the work.

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

Record Drawings. Alterations and additions to the electrical installation made during the execution of the work shall be neatly and plainly marked in red by the Contractor on the full-size set of record drawings

kept at the Engineer's field office for the project. These drawings shall be updated on a daily basis and shall be available for inspection by the Engineer during the course of the work. The record drawings shall include the following:

- Cover Sheet
- Summary of Quantities, electrical items only
- Legends, Schedules and Notes
- Plan Sheet
- Pertinent Details
- Single Line Diagram
- Other useful information useful to locate and maintain the systems.

Any modifications to the details shall be indicated. Final quantities used shall be indicated on the Summary of Quantities. Foundation depths used shall also be listed.

As part of the record drawings, the Contractor shall inventory all materials, new or existing, on the project and record information on inventory sheets provided by the Engineer.

The inventory shall include:

- Location of Equipment, including rack, chassis, slot as applicable.
- Designation of Equipment
- Equipment manufacturer
- Equipment model number
- Equipment Version Number
- Equipment Configuration
    - o Addressing, IP or other
    - o Settings, hardware or programmed
- Equipment Serial Number

The following electronic inventory forms are available from the Engineer:

- Lighting Controller Inventory
- Lighting Inventory
- Light Tower Inspection Checklist
- ITS Location Inventory

The information shall be entered in the forms; handwritten entries will not be acceptable; except for signatures. Electronic file shall also be included in the documentation.

When the work is complete, and seven days before the request for a final inspection, the set of contract drawings, stamped "**RECORD DRAWINGS**", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or electrician. The record drawings shall be submitted in PDF format on CDROM as well as hardcopy's for review and approval.

In addition to the record drawings, PDF copies of the final catalog cuts which have been Approved and Approved as Noted with applicable follow-up shall be submitted along with the record drawings. The PDF files shall clearly indicate either by filename or PDF table of contents the respective pay item number. Specific part or model numbers of items which have been selected shall be clearly visible. Hard copies of the catalog are not required with this submittal.

The Contractor shall provide two sets of electronically produced drawings in a moisture proof pouch to be kept on the inside door of the controller cabinet or other location approved by the Engineer. These drawings

shall show the final as-built circuit orientation(s) of the project in the form of a single line diagram with all luminaires numbered and clearly identified for each circuit.

Final documentation shall be submitted as a complete submittal package, i.e. record drawings, test results, inventory, etc. shall be submitted at the same time. Partial piecemeal submittals will be rejected without review. A total of five hardcopies and CDROMs of the final documentation shall be submitted.

GPS Documentation. In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following electrical components being installed, modified or being affected in other ways by this contract:

- All light poles and light towers.
- Handholes and vaults.
- Conduit roadway crossings.
- Controllers.
- Control Buildings.
- Structures with electrical connections, i.e. DMS, lighted signs.
- Electric Service locations.
- CCTV Camera installations.
- Roadway Surveillance installations.
- Fiber Optic Splice Locations.
- All fiber optic slack locations shall be identified with quantity of slack cable included. When sequential cable markings are available, those markings shall be documented as cable marking into enclosure and marking out of enclosure.

Datum to be used shall be North American 1983.

Data shall be provided electronically and in print form. The electronic format shall be compatible with MS Excel. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

1. District
2. Description of item
3. Designation
4. Use
5. Approximate station
6. Contract Number
7. Date
8. Owner
9. Latitude
10. Longitude
11. Comments

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

Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 20 feet. Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified. **Data collection prior to the submittal and review of the sample data of existing data points will be unacceptable and rejected.**

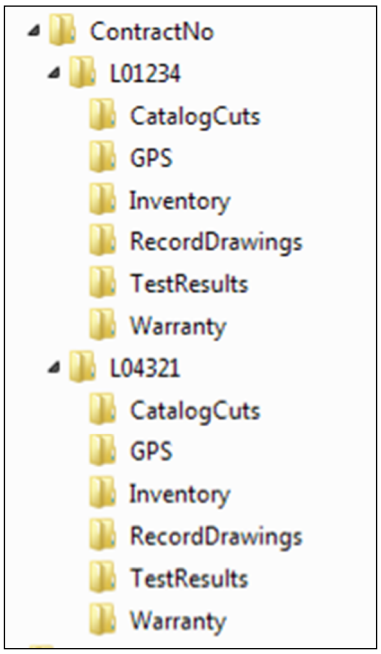
Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used

for the data collection. The receiver shall support differential correction and data shall have minimum 5 meter accuracy after post processing.

GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years."

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



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

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

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

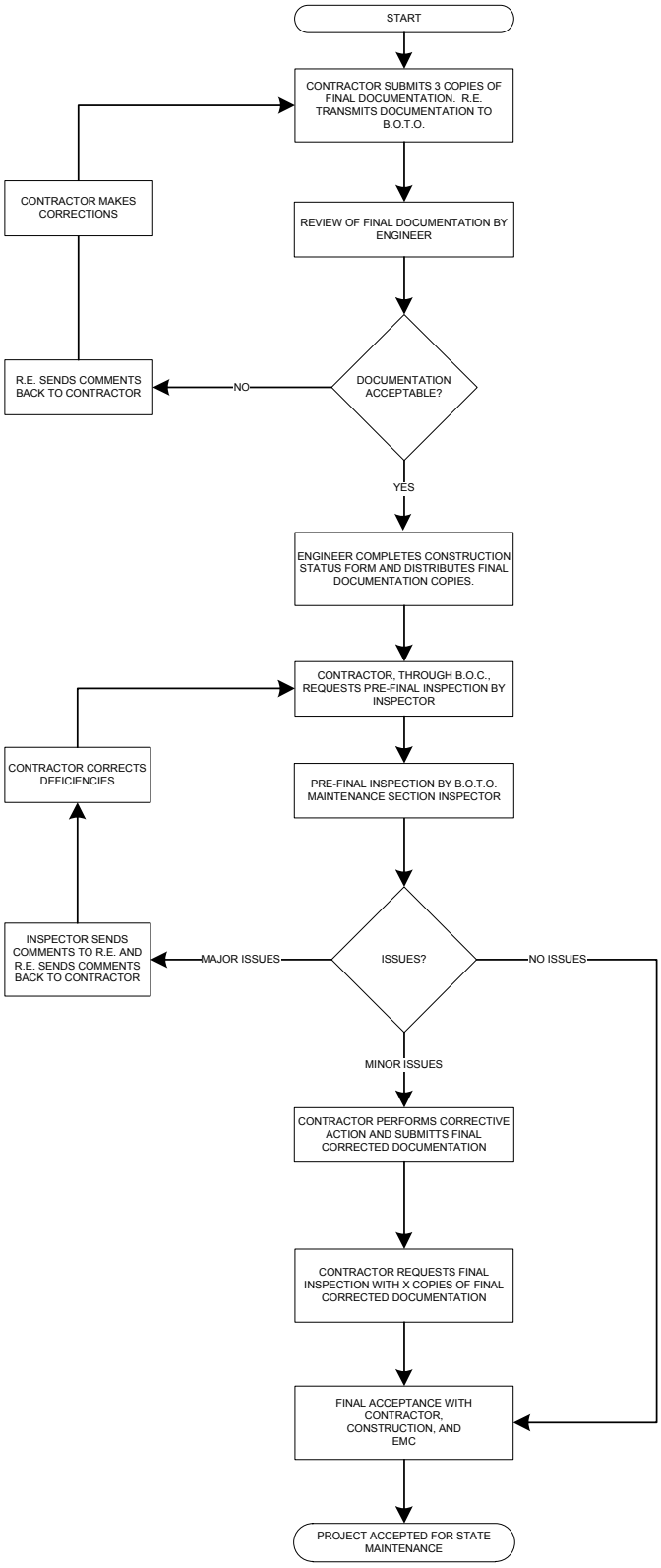
All CD's shall be labeled as illustrated in the CD Label Template contained herein.

Acceptance. Acceptance of electrical work will be given at the time when the Department assumes the responsibility to protect and maintain the work according to Article 107.30 or at the time of final inspection.

When the electrical work is complete, tested, and fully operational, the Contractor shall schedule an inspection for acceptance with the Engineer no less than seven working days prior to the desired inspection date. The Contractor shall furnish the necessary labor and equipment to make the inspection.

A written record of the test readings taken by the Contractor according to Article 801.13 shall be furnished to the Engineer seven working days before the date the inspection is scheduled. Inspection will not be

made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.



Final Acceptance Documentation Checklist

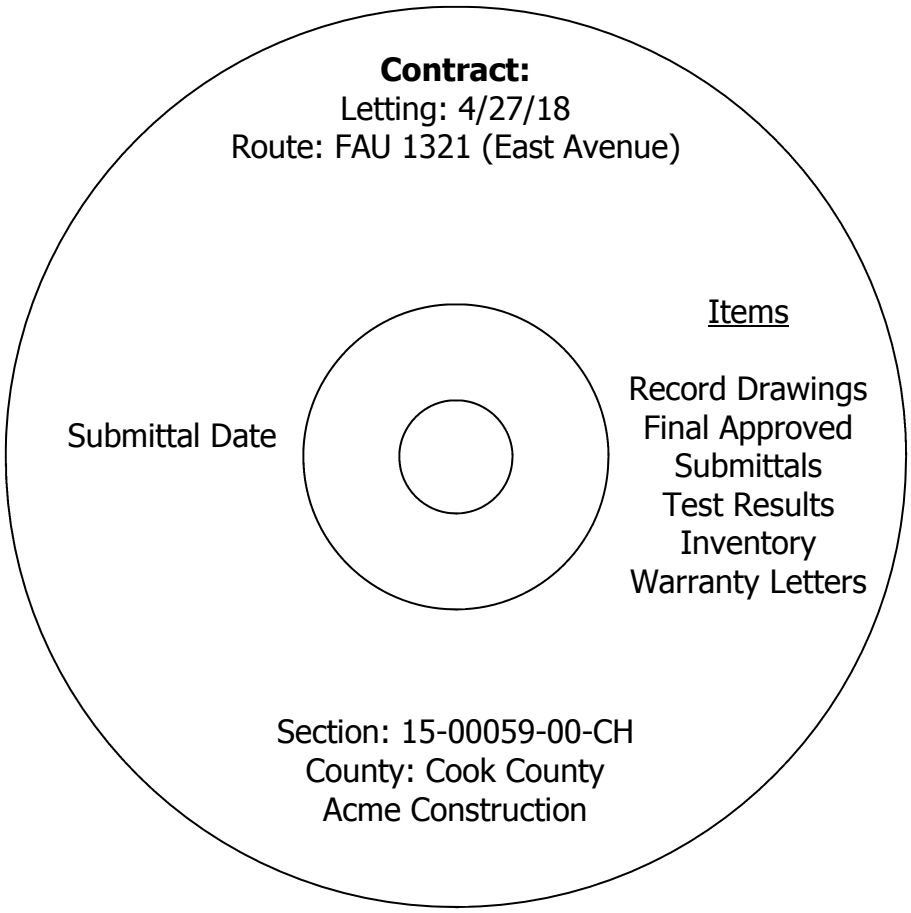
LOCATION	
Route	Common Name
Limits	Section
Contract #	County
Controller Designation(s)	EMC Database Location Number(s)

ITEM	Contractor (Verify)	Resident Engineer (Verify)
Record Drawings -Five hardcopies (11" x 17") -Scanned to Five CD-ROMs	 ☐ ☐	 ☐ ☐
Field Inspection Tests -Voltage -Amperage -Cable Insulation Resistance -Continuity -Controller Ground Rod Resistance	 ☐ ☐ ☐ ☐ ☐	 ☐ ☐ ☐ ☐ ☐
GPS Coordinates **-**Excel file	☐	☐
Job Warranty Letter	☐	☐
Catalog Cut Submittals -Approved & Approved as Noted	☐	☐
Lighting Inventory Form	☐	☐
Lighting Controller Inventory Form	☐	☐
Light Tower Inspection Form (if applicable)	☐	☐

Four Hardcopies & scanned to four CD's shall be submitted for all items above. The CD ROM shall be labeled as shown in the example contained herein.

CD LABEL FORMAT TEMPLATE.

Label must be printed; hand written labels are unacceptable and will be rejected.



Underground Raceways
Effective: March 1, 2015

Revise Article 810.04 of the Standard Specifications to read:

> "Installation. All underground conduits shall have a minimum depth of 30-inches (700 mm) below the finished grade."

Add the following to Article 810.04 of the Standard Specifications:

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

Add the following to Article 810.04 of the Standard Specifications:

"All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum or 300 mm (12") or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped.

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

The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125") thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring."

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 (ONE). 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 (LR 107-4)

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 Streamwood

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

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: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave. Office Phone Number, if available: _____

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

2000-2005 Irving Park Road (ISGS Site No. 3118-4)

City: Hanover Park State: IL Zip Code: _____

County: Cook Township: _____

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

Latitude: 42.007983215 (Decimal Degrees) Longitude: -88.154144666 (-Decimal Degrees)

Identify how the lat/long data were determined:

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

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

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	Illinois Department of Transportation	Name:	Illinois Department of Transportation
Street Address:	201 West Center Court	Street Address:	201 West Center Court
PO Box:		PO Box:	
City:	Schaumburg State: IL	City:	Schaumburg State: IL
Zip Code:	60196-1096 Phone: 847-705-4101	Zip Code:	60196-1096 Phone: 847-705-4101
Contact:	Sam Mead	Contact:	Sam Mead
Email, if available:	Sam.Mead@illinois.gov	Email, if available:	Sam.Mead@illinois.gov

Project Name: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave.

Latitude: 42.007983215 Longitude: -88.154144666

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)]:

LOCATION CB4-1 WAS SAMPLED ADJACENT TO ISGS SITE No. 3118-4. SEE FIGURE 3-1 AND TABLE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

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

TESTAMERICA ANALYTICAL REPORT - JOB ID: 500-132979-1.
ALSO SEE FIGURE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

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

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

Company Name: Weston Solutions, Inc.

Street Address: 300 Circle Plaza; Suite 202

City: Mundelein State: IL Zip Code: 60060

Phone: (224) 864-7200

Michael Castillo, P.G.
Printed Name:

Michael A Castillo
Licensed Professional Engineer or
Licensed Professional Geologist Signature:

26 September 2017
Date:

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

Summary Table of ISGS Site No. 3118-4
Comparison of Detected Constituents to Applicable Reference Concentrations
Soil Analytical Results
Illinois Department of Transportation
FAU 1321: IL Route 19 - Irving Park Road at East Avenue
Streamwood, Cook County, Illinois

Field Sample ID	CB4-1(0-6)-082217	CB4-1(6-12)-082217	Soil Reference Concentrations[A]
Sample Date	8/22/2017	8/22/2017	
Location ID	CB4-1	CB4-1	
Depth	0 - 6	6 - 12	
ISGS Site No.	3118-4	3118-4	
Parameter			
Laboratory pH (s.u.)	8.1	6.8	<6.25; >9.0
VOCs (ug/kg)			
Acetone	25	48	25000
SVOCs (ug/kg)			
Acenaphthene	32 J	ND	570000
Anthracene	73	ND	1.20E+07
Benzo(a)anthracene	230	12 J	900 / 1100 / 1800
Benzo(a)pyrene	270	ND	90 / 1300 / 2100
Benzo(b)fluoranthene	360	18 J	900 / 1500 / 2100
Benzo(g,h,i)perylene	160	ND	---
Benzo(k)fluoranthene	150	ND	9000
Chrysene	280	14 J	88000
Dibenzo(a,h)anthracene	35 J	ND	90 / 200 / 420
Fluoranthene	640	27 J	3100000
Fluorene	33 J	ND	560000
Indeno(1,2,3-cd)pyrene	160	ND	900 / 900 / 1600
Naphthalene, SVOC	6.3 J	ND	1800
Phenanthrene	490	18 J	---
Pyrene	600	27 J	2300000
Total Metals (mg/kg)			
Arsenic, Total	6.6	6	11.3 / 13.0
Barium, Total	47	100	1500
Beryllium, Total	0.67	0.86	22
Cadmium, Total	0.24 B	0.25 B	5.2
Calcium, Total	89000 B	7800 B	---
Chromium, Total	15	15	21
Cobalt, Total	11	11	20
Copper, Total	23	19	2900
Lead, Total	13	14	107
Magnesium, Total	24000 B	4700 B	325000
Manganese, Total	380 B	120 B	630 / 636
Mercury, Total	0.039	0.031	0.89
Nickel, Total	29	27	100
Potassium, Total	2000	990	---
Selenium, Total	ND	0.71 J	1.3
Sodium, Total	270	110	---
Vanadium, Total	19	23	550
Zinc, Total	62	78	5100
TCLP Metals (mg/l)			
Barium, TCLP	0.45 J	0.42 J	2
Cadmium, TCLP	0.0022 J	ND	0.005
Manganese, TCLP	3.3	1.3	0.15
Mercury, TCLP	0.00043	ND	0.002
Zinc, SPLP	ND	0.12 J	5
SPLP Metals (mg/l)			
Barium, SPLP	ND	0.21 J	2
Chromium, SPLP	ND	0.044	0.1
Cobalt, SPLP	ND	0.014 J	1
Copper, SPLP	ND	0.056	0.65
Iron, SPLP	2.3	36 J+	5
Lead, SPLP	ND	0.028	0.0075
Manganese, SPLP	0.066	0.13	0.15
Mercury, SPLP	ND	0.00022	0.002
Nickel, SPLP	ND	0.039	0.1

Summary Table of ISGS Site No. 3118-4
Comparison of Detected Constituents to Applicable Reference Concentrations
Soil Analytical Results
Illinois Department of Transportation
FAU 1321: IL Route 19 - Irving Park Road at East Avenue
Streamwood, Cook County, Illinois

Notes:

--- - not applicable or value not available.

[A] - Soil reference concentrations from MAC Table. Background values for Chicago corporate limits and MSA counties are ir

ND - Constituent not detected above the reporting limit.

B - Constituent detected in the laboratory blank and investigative samples.

J - Estimated concentration.

J+ - Estimated concentration, biased high.

Shaded values indicate concentration **exceeds** Reference Concentration.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-132979-1
Client Project/Site: IDOT - Streamwood - WO 061

For:
Weston Solutions, Inc.
300 Plaza Circle, Suite 202
Mundelein, Illinois 60060

Attn: Mr. S. Babusukumar

Authorized for release by:
8/31/2017 10:40:36 AM

Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

Client Sample ID: CB4-1(0-6)-082217
Date Collected: 08/22/17 11:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-10
Matrix: Solid
Percent Solids: 83.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25		17	7.4	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Benzene	<1.7		1.7	0.43	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Bromodichloromethane	<1.7		1.7	0.35	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Bromoform	<1.7		1.7	0.50	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Bromomethane	<4.2		4.2	1.6	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Carbon disulfide	<4.2		4.2	0.88	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Carbon tetrachloride	<1.7		1.7	0.49	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Chlorobenzene	<1.7		1.7	0.63	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Chloroethane	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Chloroform	<1.7		1.7	0.59	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Chloromethane	<4.2		4.2	1.7	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
cis-1,2-Dichloroethene	<1.7		1.7	0.47	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
cis-1,3-Dichloropropene	<1.7		1.7	0.51	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Dibromochloromethane	<1.7		1.7	0.55	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,1-Dichloroethane	<1.7		1.7	0.58	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,2-Dichloroethane	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,1-Dichloroethene	<1.7		1.7	0.58	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,2-Dichloropropane	<1.7		1.7	0.44	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,3-Dichloropropene, Total	<1.7		1.7	0.60	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Ethylbenzene	<1.7		1.7	0.81	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
2-Hexanone	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Methylene Chloride	<4.2		4.2	1.7	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Methyl Ethyl Ketone	<4.2		4.2	1.9	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
methyl isobutyl ketone	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Methyl tert-butyl ether	<1.7		1.7	0.50	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Styrene	<1.7		1.7	0.51	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,1,2,2-Tetrachloroethane	<1.7		1.7	0.54	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Tetrachloroethene	<1.7		1.7	0.58	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Toluene	<1.7		1.7	0.43	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
trans-1,2-Dichloroethene	<1.7		1.7	0.75	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
trans-1,3-Dichloropropene	<1.7		1.7	0.60	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,1,1-Trichloroethane	<1.7		1.7	0.57	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
1,1,2-Trichloroethane	<1.7		1.7	0.73	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Trichloroethene	<1.7		1.7	0.57	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Vinyl chloride	<1.7		1.7	0.75	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1
Xylenes, Total	<3.4		3.4	0.54	ug/Kg	☼	08/23/17 07:40	08/25/17 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 131*	*08/23/17 07:40*	*08/25/17 16:07*	*1*
Dibromofluoromethane	*102*		*75 - 126*	*08/23/17 07:40*	*08/25/17 16:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 134*	*08/23/17 07:40*	*08/25/17 16:07*	*1*
Toluene-d8 (Surr)	*100*		*75 - 124*	*08/23/17 07:40*	*08/25/17 16:07*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<200		200	43	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
1,2-Dichlorobenzene	<200		200	47	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
1,3-Dichlorobenzene	<200		200	45	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
1,4-Dichlorobenzene	<200		200	51	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2,2'-oxybis[1-chloropropane]	<200		200	46	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1

Client Sample ID: CB4-1(0-6)-082217
Date Collected: 08/22/17 11:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-10
Matrix: Solid
Percent Solids: 83.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<390		390	90	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2,4,6-Trichlorophenol	<390		390	140	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2,4-Dichlorophenol	<390		390	94	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2,4-Dimethylphenol	<390		390	150	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2,4-Dinitrophenol	<800		800	700	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2,4-Dinitrotoluene	<200		200	63	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2,6-Dinitrotoluene	<200		200	78	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2-Chloronaphthalene	<200		200	44	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2-Chlorophenol	<200		200	68	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2-Methylnaphthalene	<80		80	7.3	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2-Methylphenol	<200		200	64	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2-Nitroaniline	<200		200	53	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
2-Nitrophenol	<390		390	94	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
3 & 4 Methylphenol	<200		200	66	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
3,3'-Dichlorobenzidine	<200		200	55	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
3-Nitroaniline	<390		390	120	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
4,6-Dinitro-2-methylphenol	<800		800	320	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
4-Bromophenyl phenyl ether	<200		200	52	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
4-Chloro-3-methylphenol	<390		390	130	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
4-Chloroaniline	<800		800	190	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
4-Chlorophenyl phenyl ether	<200		200	46	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
4-Nitroaniline	<390		390	170	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
4-Nitrophenol	<800		800	380	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Acenaphthene	**32**	**J**	39	7.1	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Acenaphthylene	<39		39	5.2	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Anthracene	**73**		39	6.6	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Benzo[a]anthracene	**230**		39	5.3	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Benzo[a]pyrene	**270**		39	7.7	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Benzo[b]fluoranthene	**360**		39	8.6	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Benzo[g,h,i]perylene	**160**		39	13	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Benzo[k]fluoranthene	**150**		39	12	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Bis(2-chloroethoxy)methane	<200		200	40	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Bis(2-chloroethyl)ether	<200		200	59	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Bis(2-ethylhexyl) phthalate	<200		200	72	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Butyl benzyl phthalate	<200		200	75	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Carbazole	<200		200	99	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Chrysene	**280**		39	11	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Dibenz(a,h)anthracene	**35**	**J**	39	7.7	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Dibenzofuran	<200		200	46	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Diethyl phthalate	<200		200	67	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Dimethyl phthalate	<200		200	52	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Di-n-butyl phthalate	<200		200	60	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Di-n-octyl phthalate	<200		200	65	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Fluoranthene	**640**		39	7.4	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Fluorene	**33**	**J**	39	5.6	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Hexachlorobenzene	<80		80	9.2	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Hexachlorobutadiene	<200		200	62	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Hexachlorocyclopentadiene	<800		800	230	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Hexachloroethane	<200		200	60	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1

Client Sample ID: CB4-1(0-6)-082217
Date Collected: 08/22/17 11:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-10
Matrix: Solid
Percent Solids: 83.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**160**		39	10	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Isophorone	<200		200	45	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Naphthalene	**6.3**	**J**	39	6.1	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Nitrobenzene	<39		39	9.9	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
N-Nitrosodi-n-propylamine	<80		80	48	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
N-Nitrosodiphenylamine	<200		200	47	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Pentachlorophenol	<800		800	640	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Phenanthrene	**490**		39	5.5	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Phenol	<200		200	88	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1
Pyrene	**600**		39	7.9	ug/Kg	☼	08/28/17 07:13	08/30/17 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*69*		*25 - 139*	*08/28/17 07:13*	*08/30/17 14:31*	*1*
2-Fluorobiphenyl	*80*		*44 - 121*	*08/28/17 07:13*	*08/30/17 14:31*	*1*
2-Fluorophenol	*110*		*46 - 133*	*08/28/17 07:13*	*08/30/17 14:31*	*1*
Nitrobenzene-d5	*80*		*41 - 120*	*08/28/17 07:13*	*08/30/17 14:31*	*1*
Phenol-d5	*96*		*46 - 125*	*08/28/17 07:13*	*08/30/17 14:31*	*1*
Terphenyl-d14	*92*		*35 - 160*	*08/28/17 07:13*	*08/30/17 14:31*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:36	1
Barium	**0.45**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:36	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:36	1
Cadmium	**0.0022**	**J**	0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:36	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:36	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:36	1
Copper	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:36	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:36	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:36	1
Manganese	**3.3**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:36	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:36	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:36	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:36	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:36	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 01:00	1
Barium	<0.50		0.50	0.050	mg/L		08/28/17 08:30	08/29/17 01:00	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 01:00	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 01:00	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:00	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:00	1
Copper	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:00	1
Iron	**2.3**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 01:00	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 01:00	1
Manganese	**0.066**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:00	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:00	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 01:00	1

Client Sample ID: CB4-1(0-6)-082217
Date Collected: 08/22/17 11:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-10
Matrix: Solid
Percent Solids: 83.5

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:00	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:30	08/29/17 01:00	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Arsenic	**6.6**		0.59	0.20	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Barium	**47**		0.59	0.067	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Beryllium	**0.67**		0.24	0.055	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Cadmium	**0.24**	**B**	0.12	0.021	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Calcium	**89000**	**B**	120	20	mg/Kg	☼	08/28/17 09:27	08/29/17 12:51	10
Chromium	**15**		0.59	0.29	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Cobalt	**11**		0.30	0.078	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Copper	**23**		0.59	0.17	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Iron	**19000**	**B**	12	6.2	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Lead	**13**		0.30	0.14	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Magnesium	**24000**	**B**	5.9	2.9	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Manganese	**380**	**B**	0.59	0.086	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Nickel	**29**		0.59	0.17	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Potassium	**2000**		30	10	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Selenium	<0.59		0.59	0.35	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Silver	<0.30		0.30	0.076	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Sodium	**270**		59	8.8	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Thallium	<0.59		0.59	0.30	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Vanadium	**19**		0.30	0.070	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1
Zinc	**62**		1.2	0.52	mg/Kg	☼	08/28/17 09:27	08/28/17 21:02	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.43**		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 11:07	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:41	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**39**		18	6.0	ug/Kg	☼	08/24/17 08:25	08/24/17 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.1**		0.20	0.20	SU			08/23/17 16:41	1

Client Sample ID: CB4-1(6-12)-082217
Date Collected: 08/22/17 11:45
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-11
Matrix: Solid
Percent Solids: 62.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	48		27	12	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Benzene	<2.7		2.7	0.68	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Bromodichloromethane	<2.7		2.7	0.54	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Bromoform	<2.7		2.7	0.78	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Bromomethane	<6.7		6.7	2.5	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Carbon disulfide	<6.7		6.7	1.4	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Carbon tetrachloride	<2.7		2.7	0.77	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Chlorobenzene	<2.7		2.7	0.98	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Chloroethane	<6.7		6.7	2.0	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Chloroform	<2.7		2.7	0.92	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Chloromethane	<6.7		6.7	2.7	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
cis-1,2-Dichloroethene	<2.7		2.7	0.74	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
cis-1,3-Dichloropropene	<2.7		2.7	0.80	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Dibromochloromethane	<2.7		2.7	0.87	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,1-Dichloroethane	<2.7		2.7	0.91	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,2-Dichloroethane	<6.7		6.7	2.1	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,1-Dichloroethene	<2.7		2.7	0.92	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,2-Dichloropropane	<2.7		2.7	0.69	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,3-Dichloropropene, Total	<2.7		2.7	0.94	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Ethylbenzene	<2.7		2.7	1.3	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
2-Hexanone	<6.7		6.7	2.1	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Methylene Chloride	<6.7		6.7	2.6	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Methyl Ethyl Ketone	<6.7		6.7	3.0	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
methyl isobutyl ketone	<6.7		6.7	2.0	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Methyl tert-butyl ether	<2.7		2.7	0.78	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Styrene	<2.7		2.7	0.80	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,1,2,2-Tetrachloroethane	<2.7		2.7	0.85	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Tetrachloroethene	<2.7		2.7	0.91	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Toluene	<2.7		2.7	0.67	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
trans-1,2-Dichloroethene	<2.7		2.7	1.2	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
trans-1,3-Dichloropropene	<2.7		2.7	0.94	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,1,1-Trichloroethane	<2.7		2.7	0.89	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
1,1,2-Trichloroethane	<2.7		2.7	1.1	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Trichloroethene	<2.7		2.7	0.90	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Vinyl chloride	<2.7		2.7	1.2	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1
Xylenes, Total	<5.3		5.3	0.85	ug/Kg	☼	08/23/17 07:40	08/25/17 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*75 - 131*	*08/23/17 07:40*	*08/25/17 16:32*	*1*
Dibromofluoromethane	*102*		*75 - 126*	*08/23/17 07:40*	*08/25/17 16:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 134*	*08/23/17 07:40*	*08/25/17 16:32*	*1*
Toluene-d8 (Surr)	*101*		*75 - 124*	*08/23/17 07:40*	*08/25/17 16:32*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<260		260	55	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
1,2-Dichlorobenzene	<260		260	61	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
1,3-Dichlorobenzene	<260		260	57	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
1,4-Dichlorobenzene	<260		260	65	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2,2'-oxybis[1-chloropropane]	<260		260	59	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1

Client Sample ID: CB4-1(6-12)-082217
Date Collected: 08/22/17 11:45
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-11
Matrix: Solid
Percent Solids: 62.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<510		510	120	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2,4,6-Trichlorophenol	<510		510	180	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2,4-Dichlorophenol	<510		510	120	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2,4-Dimethylphenol	<510		510	190	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2,4-Dinitrophenol	<1000		1000	900	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2,4-Dinitrotoluene	<260		260	81	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2,6-Dinitrotoluene	<260		260	100	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2-Chloronaphthalene	<260		260	56	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2-Chlorophenol	<260		260	87	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2-Methylnaphthalene	<100		100	9.4	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2-Methylphenol	<260		260	82	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2-Nitroaniline	<260		260	69	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
2-Nitrophenol	<510		510	120	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
3 & 4 Methylphenol	<260		260	85	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
3,3'-Dichlorobenzidine	<260		260	71	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
3-Nitroaniline	<510		510	160	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
4,6-Dinitro-2-methylphenol	<1000		1000	410	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
4-Bromophenyl phenyl ether	<260		260	67	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
4-Chloro-3-methylphenol	<510		510	170	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
4-Chloroaniline	<1000		1000	240	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
4-Chlorophenyl phenyl ether	<260		260	60	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
4-Nitroaniline	<510		510	210	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
4-Nitrophenol	<1000		1000	490	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Acenaphthene	<51		51	9.2	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Acenaphthylene	<51		51	6.7	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Anthracene	<51		51	8.5	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Benzo[a]anthracene	**12**	**J**	51	6.9	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Benzo[a]pyrene	<51		51	9.9	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Benzo[b]fluoranthene	**18**	**J**	51	11	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Benzo[g,h,i]perylene	<51		51	16	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Benzo[k]fluoranthene	<51		51	15	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Bis(2-chloroethoxy)methane	<260		260	52	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Bis(2-chloroethyl)ether	<260		260	76	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Bis(2-ethylhexyl) phthalate	<260		260	93	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Butyl benzyl phthalate	<260		260	97	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Carbazole	<260		260	130	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Chrysene	**14**	**J**	51	14	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Dibenz(a,h)anthracene	<51		51	9.9	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Dibenzofuran	<260		260	60	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Diethyl phthalate	<260		260	86	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Dimethyl phthalate	<260		260	67	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Di-n-butyl phthalate	<260		260	78	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Di-n-octyl phthalate	<260		260	83	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Fluoranthene	**27**	**J**	51	9.5	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Fluorene	<51		51	7.2	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Hexachlorobenzene	<100		100	12	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Hexachlorobutadiene	<260		260	80	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Hexachlorocyclopentadiene	<1000		1000	290	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Hexachloroethane	<260		260	78	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1

Client Sample ID: CB4-1(6-12)-082217
Date Collected: 08/22/17 11:45
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-11
Matrix: Solid
Percent Solids: 62.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	<51		51	13	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Isophorone	<260		260	57	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Naphthalene	<51		51	7.8	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Nitrobenzene	<51		51	13	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
N-Nitrosodi-n-propylamine	<100		100	62	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
N-Nitrosodiphenylamine	<260		260	60	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Pentachlorophenol	<1000		1000	820	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Phenanthrene	**18**	**J**	51	7.1	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Phenol	<260		260	110	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1
Pyrene	**27**	**J**	51	10	ug/Kg	☼	08/28/17 07:13	08/30/17 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*62*		*25 - 139*	*08/28/17 07:13*	*08/30/17 15:00*	*1*
2-Fluorobiphenyl	*66*		*44 - 121*	*08/28/17 07:13*	*08/30/17 15:00*	*1*
2-Fluorophenol	*87*		*46 - 133*	*08/28/17 07:13*	*08/30/17 15:00*	*1*
Nitrobenzene-d5	*61*		*41 - 120*	*08/28/17 07:13*	*08/30/17 15:00*	*1*
Phenol-d5	*76*		*46 - 125*	*08/28/17 07:13*	*08/30/17 15:00*	*1*
Terphenyl-d14	*72*		*35 - 160*	*08/28/17 07:13*	*08/30/17 15:00*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:40	1
Barium	**0.42**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:40	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:40	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:40	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:40	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:40	1
Copper	**0.014**	**J B**	0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:40	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:40	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:40	1
Manganese	**1.3**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:40	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:40	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:40	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:40	1
Zinc	**0.024**	**J B**	0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:40	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 01:04	1
Barium	**0.21**	**J**	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 01:04	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 01:04	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 01:04	1
Chromium	**0.044**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:04	1
Cobalt	**0.014**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:04	1
Copper	**0.056**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:04	1
Iron	**36**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 01:04	1
Lead	**0.028**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 01:04	1
Manganese	**0.13**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:04	1
Nickel	**0.039**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:04	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 01:04	1

Client Sample ID: CB4-1(6-12)-082217
Date Collected: 08/22/17 11:45
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-11
Matrix: Solid
Percent Solids: 62.4

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 01:04	1
Zinc	**0.12**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 01:04	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.5		1.5	0.29	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Arsenic	**6.0**		0.75	0.26	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Barium	**100**		0.75	0.085	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Beryllium	**0.86**		0.30	0.070	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Cadmium	**0.25**	**B**	0.15	0.027	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Calcium	**7800**	**B**	15	2.5	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Chromium	**15**		0.75	0.37	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Cobalt	**11**		0.37	0.098	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Copper	**19**		0.75	0.21	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Iron	**19000**	**B**	15	7.8	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Lead	**14**		0.37	0.17	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Magnesium	**4700**	**B**	7.5	3.7	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Manganese	**120**	**B**	0.75	0.11	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Nickel	**27**		0.75	0.22	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Potassium	**990**		37	13	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Selenium	**0.71**	**J**	0.75	0.44	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Silver	<0.37		0.37	0.096	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Sodium	**110**		75	11	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Thallium	<0.75		0.75	0.37	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Vanadium	**23**		0.37	0.088	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1
Zinc	**78**		1.5	0.66	mg/Kg	☼	08/28/17 09:27	08/28/17 21:06	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 11:08	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.22**		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:43	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**31**		25	8.2	ug/Kg	☼	08/24/17 08:25	08/24/17 12:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.8**		0.20	0.20	SU			08/23/17 16:41	1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	1,3-Dichloropropene, Total
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604
Phone: 708.534.5200 Fax: 708.534.

500-132979 COC

(optional)

Report To
Contact: S. BabuSudKumar
Company: Weston Solutions Inc
Address: 300 Plaza Circle, Ste 202
Address: Mundelein, IL 60060
Phone: 224-864-7200
Fax: 224-864-7236
E-Mail:

(optional)

Bill To
Contact: SAME
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-132979

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler: 2.5

Client: Weston Solutions Inc
Client Project #: 02056-014-061.0030
Project Name: IDOT 061-IL 19 at East Ave
Project Location/State: Streamwood, IL
Lab Project #:
Sampler: M. Doheny-Skubic
Lab PM: D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	pH	Comments
1		CB7-1(0-6)-082217	8/22/17	1000	5	S	X	X	X	X	X	
2		CB7-1(0-6)-082217D		1000								
3		CB7-1(6-10)-082217		1005								
4		BP-2(0-6)-082217		1035								
5		BP-2(6-12)-082217		1040								
6		BP-1(0-6)-082217		1100								
7		BP-1(6-12)-082217		1105								
8		FA-1(0-6)-082217		1118								
9		FA-1(6-12)-082217		1122								
10		CB4-1(0-6)-082217	8/22/17	1140	5	S	X	X	X	X	X	

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/17	1400	[illegible]	TA	8/23/17	1400
[illegible]	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact: S. Babusukumar
Company: Weston Solutions Inc.
Address: 300 Plaza Circle, Ste. 202
Address: Mundelein, IL 60060
Phone: 224-864-7200
Fax: 224-864-7236
E-Mail:

(optional)
Bill To
Contact: SAME
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-132979
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler:

Client: Weston Solutions
Client Project #: 02056.014.061.0030
Project Name: IDOT 061-IL 19 at East Ave
Project Location/State: Streamwood, IL
Lab Project #:
Sampler: M. Doherty-Skubic
Lab PM: D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	TPH					Comments
11		CB4-1(6-12)-082217	8/22/17	1145	5	S		X	X	X	X	X					MDS
★	AD	LAST ITEM AA															MDS
																	MDS
																	MDS
																	MDS
																	MDS
																	MDS
																	MDS
																	MDS

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/2017	1400	[illegible]	TA	8/22/17	1400
P. Neal	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

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: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave. Office Phone Number, if available: _____

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

1236 Irving Park Road (ISGS Site No. 3118-5)

City: Streamwood State: IL Zip Code: _____

County: Cook Township: _____

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

Latitude: 42.008395531 (Decimal Degrees) Longitude: -88.154285903 (-Decimal Degrees)

Identify how the lat/long data were determined:

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

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

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	Illinois Department of Transportation	Name:	Illinois Department of Transportation
Street Address:	201 West Center Court	Street Address:	201 West Center Court
PO Box:		PO Box:	
City:	Schaumburg State: IL	City:	Schaumburg State: IL
Zip Code:	60196-1096 Phone: 847-705-4101	Zip Code:	60196-1096 Phone: 847-705-4101
Contact:	Sam Mead	Contact:	Sam Mead
Email, if available:	Sam.Mead@illinois.gov	Email, if available:	Sam.Mead@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave.

Latitude: 42.008395531 Longitude: -88.154285903

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)]:

LOCATIONS BP-1 AND BP-2 WERE SAMPLED ADJACENT TO ISGS SITE No. 3118-5. SEE FIGURE 3-1 AND TABLE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

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

TESTAMERICA ANALYTICAL REPORT - JOB ID: 500-132979-1.
ALSO SEE FIGURE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

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

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

Company Name: Weston Solutions, Inc.

Street Address: 300 Circle Plaza; Suite 202

City: Mundelein State: IL Zip Code: 60060

Phone: (224) 864-7200

Michael Castillo, P.G.
Printed Name:

Michael A Castillo
Licensed Professional Engineer or
Licensed Professional Geologist Signature:

26 September 2017
Date:

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

Summary Table of ISGS Site No. 3118-5
Comparison of Detected Constituents to Applicable Reference Concentrations
Soil Analytical Results
Illinois Department of Transportation
FAU 1321: IL Route 19 - Irving Park Road at East Avenue
Streamwood, Cook County, Illinois

Field Sample ID	BP-1(0-6)-082217	BP-1(6-12)-082217	BP-2(0-6)-082217	BP-2(6-12)-082217	Soil Reference Concentrations[A]
Sample Date	8/22/2017	8/22/2017	8/22/2017	8/22/2017	
Location ID	BP-1	BP-1	BP-2	BP-2	
Depth	0 - 6	6 - 12	0 - 6	6 - 12	
ISGS Site No.	3118-5	3118-5	3118-5	3118-5	
Parameter					
Laboratory pH (s.u.)	7.9	8.2	8.2	8.7	<6.25; >9.0
VOCs (ug/kg)					
Acetone	19	ND	ND	ND	25000
SVOCs (ug/kg)					
Anthracene	25 J	ND	ND	ND	1.20E+07
Benzo(a)anthracene	160	ND	19 J	ND	900 / 1100 / 1800
Benzo(a)pyrene	180	ND	16 J	ND	90 / 1300 / 2100
Benzo(b)fluoranthene	210	ND	21 J	ND	900 / 1500 / 2100
Benzo(g,h,i)perylene	120	ND	ND	13 J	---
Benzo(k)fluoranthene	130	ND	13 J	ND	9000
bis(2-Ethylhexyl)phthalate	150 J	ND	ND	ND	46000
Chrysene	190	ND	20 J	12 J	88000
Dibenzo(a,h)anthracene	20 J	ND	ND	ND	90 / 200 / 420
Fluoranthene	390	ND	40 J	ND	3100000
Fluorene	7.4 J	ND	ND	ND	560000
Indeno(1,2,3-cd)pyrene	110	ND	ND	ND	900 / 900 / 1600
Phenanthrene	180	ND	20 J	ND	---
Pyrene	350	ND	40 J	16 J	2300000
Total Metals (mg/kg)					
Arsenic, Total	7.3	11	5.7	8.6	11.3 / 13.0
Barium, Total	58	66	100	40	1500
Beryllium, Total	0.84	0.92	0.8	0.71	22
Cadmium, Total	ND	0.26 B	0.25 B	0.27 B	5.2
Calcium, Total	34000 B	5700 B	4300 B	120000 B	---
Chromium, Total	17	19	17	15	21
Cobalt, Total	15	17	15	10	20
Copper, Total	25	22	18	24	2900
Lead, Total	21	17	16	13	107
Magnesium, Total	20000 B	5900 B	3500 B	23000 B	325000
Manganese, Total	400 B	140 B	550 B	260 B	630 / 636
Mercury, Total	0.017 J	0.03	0.037	0.026	0.89
Nickel, Total	34	39	26	27	100
Potassium, Total	2100	1800	1500	2300	---
Selenium, Total	ND	ND	0.67	ND	1.3
Sodium, Total	340	180	120	360	---
Vanadium, Total	21	32	25	19	550
Zinc, Total	72	73	62	63	5100
TCLP Metals (mg/l)					
Barium, TCLP	0.43 J	0.36 J	0.43 J	0.33 J	2
Cadmium, TCLP	0.002 J	ND	ND	0.0039 J	0.005
Cobalt, TCLP	0.014 J	ND	ND	0.012 J	1
Manganese, TCLP	4	0.88	0.055	3.2	0.15
Mercury, TCLP	ND	ND	0.00023	ND	0.002
Nickel, TCLP	ND	ND	ND	0.013 J	0.1
Zinc, SPLP	0.034 J	0.075 J	0.15 J	0.33 J	5
SPLP Metals (mg/l)					
Arsenic, SPLP	ND	ND	ND	0.046 J	0.05
Barium, SPLP	0.082 J	0.18 J	0.38 J	0.45 J	2
Beryllium, SPLP	ND	ND	ND	0.005	0.004
Cadmium, SPLP	ND	ND	ND	0.0022 J	0.005
Chromium, SPLP	0.016 J	0.038	0.093	0.13	0.1
Cobalt, SPLP	ND	0.011 J	0.012 J	0.039	1
Copper, SPLP	0.028	0.035	0.06	0.13	0.65
Lead, SPLP	0.014	0.018	0.029	0.063	0.0075
Manganese, SPLP	0.09	0.15	0.27	0.58	0.15
Nickel, SPLP	0.014 J	0.034	0.058	0.15	0.1

Summary Table of ISGS Site No. 3118-5
Comparison of Detected Constituents to Applicable Reference Concentrations
Soil Analytical Results
Illinois Department of Transportation
FAU 1321: IL Route 19 - Irving Park Road at East Avenue
Streamwood, Cook County, Illinois

Notes:

--- - not applicable or value not available.

[A] - Soil reference concentrations from MAC Table. Background values for Chicago corporate limits and MSA counties are included, as applic

ND - Constituent not detected above the reporting limit.

B - Constituent detected in the laboratory blank and investigative samples.

J - Estimated concentration.

Shaded values indicate concentration **exceeds** Reference Concentration.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-132979-1
Client Project/Site: IDOT - Streamwood - WO 061

For:
Weston Solutions, Inc.
300 Plaza Circle, Suite 202
Mundelein, Illinois 60060

Attn: Mr. S. Babusukumar

Authorized for release by:
8/31/2017 10:40:36 AM

Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

Client Sample ID: BP-2(0-6)-082217
Date Collected: 08/22/17 10:35
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-4
Matrix: Solid
Percent Solids: 79.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<17		17	7.4	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Benzene	<1.7		1.7	0.43	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Bromodichloromethane	<1.7		1.7	0.34	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Bromoform	<1.7		1.7	0.49	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Bromomethane	<4.2		4.2	1.6	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Carbon disulfide	<4.2		4.2	0.88	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Carbon tetrachloride	<1.7		1.7	0.49	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Chlorobenzene	<1.7		1.7	0.63	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Chloroethane	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Chloroform	<1.7		1.7	0.59	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Chloromethane	<4.2		4.2	1.7	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
cis-1,2-Dichloroethene	<1.7		1.7	0.47	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
cis-1,3-Dichloropropene	<1.7		1.7	0.51	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Dibromochloromethane	<1.7		1.7	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,1-Dichloroethane	<1.7		1.7	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,2-Dichloroethane	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,1-Dichloroethene	<1.7		1.7	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,2-Dichloropropane	<1.7		1.7	0.44	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,3-Dichloropropene, Total	<1.7		1.7	0.59	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Ethylbenzene	<1.7		1.7	0.81	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
2-Hexanone	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Methylene Chloride	<4.2		4.2	1.7	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Methyl Ethyl Ketone	<4.2		4.2	1.9	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
methyl isobutyl ketone	<4.2		4.2	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Methyl tert-butyl ether	<1.7		1.7	0.50	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Styrene	<1.7		1.7	0.51	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,1,2,2-Tetrachloroethane	<1.7		1.7	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Tetrachloroethene	<1.7		1.7	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Toluene	<1.7		1.7	0.43	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
trans-1,2-Dichloroethene	<1.7		1.7	0.75	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
trans-1,3-Dichloropropene	<1.7		1.7	0.59	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,1,1-Trichloroethane	<1.7		1.7	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
1,1,2-Trichloroethane	<1.7		1.7	0.73	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Trichloroethene	<1.7		1.7	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Vinyl chloride	<1.7		1.7	0.75	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1
Xylenes, Total	<3.4		3.4	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*75 - 131*	*08/23/17 07:40*	*08/24/17 21:28*	*1*
Dibromofluoromethane	*103*		*75 - 126*	*08/23/17 07:40*	*08/24/17 21:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 134*	*08/23/17 07:40*	*08/24/17 21:28*	*1*
Toluene-d8 (Surr)	*97*		*75 - 124*	*08/23/17 07:40*	*08/24/17 21:28*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<210		210	45	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
1,2-Dichlorobenzene	<210		210	50	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
1,3-Dichlorobenzene	<210		210	47	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
1,4-Dichlorobenzene	<210		210	54	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2,2'-oxybis[1-chloropropane]	<210		210	48	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1

Client Sample ID: BP-2(0-6)-082217
Date Collected: 08/22/17 10:35
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-4
Matrix: Solid
Percent Solids: 79.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<420		420	95	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2,4,6-Trichlorophenol	<420		420	140	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2,4-Dichlorophenol	<420		420	99	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2,4-Dimethylphenol	<420		420	160	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2,4-Dinitrophenol	<840		840	740	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2,4-Dinitrotoluene	<210		210	66	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2,6-Dinitrotoluene	<210		210	82	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2-Chloronaphthalene	<210		210	46	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2-Chlorophenol	<210		210	71	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2-Methylnaphthalene	<84		84	7.7	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2-Methylphenol	<210		210	67	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2-Nitroaniline	<210		210	56	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
2-Nitrophenol	<420		420	99	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
3 & 4 Methylphenol	<210		210	70	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
3,3'-Dichlorobenzidine	<210		210	58	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
3-Nitroaniline	<420		420	130	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
4,6-Dinitro-2-methylphenol	<840		840	340	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
4-Bromophenyl phenyl ether	<210		210	55	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
4-Chloro-3-methylphenol	<420		420	140	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
4-Chloroaniline	<840		840	200	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
4-Chlorophenyl phenyl ether	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
4-Nitroaniline	<420		420	170	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
4-Nitrophenol	<840		840	400	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Acenaphthene	<42		42	7.5	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Acenaphthylene	<42		42	5.5	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Anthracene	<42		42	7.0	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Benzo[a]anthracene	**19**	**J**	42	5.6	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Benzo[a]pyrene	**16**	**J**	42	8.1	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Benzo[b]fluoranthene	**21**	**J**	42	9.0	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Benzo[g,h,i]perylene	<42		42	13	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Benzo[k]fluoranthene	**13**	**J**	42	12	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Bis(2-chloroethoxy)methane	<210		210	43	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Bis(2-chloroethyl)ether	<210		210	63	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Bis(2-ethylhexyl) phthalate	<210		210	76	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Butyl benzyl phthalate	<210		210	80	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Carbazole	<210		210	100	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Chrysene	**20**	**J**	42	11	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Dibenz(a,h)anthracene	<42		42	8.1	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Dibenzofuran	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Diethyl phthalate	<210		210	71	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Dimethyl phthalate	<210		210	55	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Di-n-butyl phthalate	<210		210	64	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Di-n-octyl phthalate	<210		210	68	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Fluoranthene	**40**	**J**	42	7.7	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Fluorene	<42		42	5.9	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Hexachlorobenzene	<84		84	9.7	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Hexachlorobutadiene	<210		210	66	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Hexachlorocyclopentadiene	<840		840	240	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Hexachloroethane	<210		210	64	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1

Client Sample ID: BP-2(0-6)-082217
Date Collected: 08/22/17 10:35
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-4
Matrix: Solid
Percent Solids: 79.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	<42		42	11	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Isophorone	<210		210	47	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Naphthalene	<42		42	6.4	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Nitrobenzene	<42		42	10	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
N-Nitrosodi-n-propylamine	<84		84	51	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
N-Nitrosodiphenylamine	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Pentachlorophenol	<840		840	670	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Phenanthrene	**20**	**J**	42	5.8	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Phenol	<210		210	93	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1
Pyrene	**40**	**J**	42	8.3	ug/Kg	☼	08/28/17 07:13	08/29/17 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*62*		*25 - 139*	*08/28/17 07:13*	*08/29/17 16:22*	*1*
2-Fluorobiphenyl	*73*		*44 - 121*	*08/28/17 07:13*	*08/29/17 16:22*	*1*
2-Fluorophenol	*96*		*46 - 133*	*08/28/17 07:13*	*08/29/17 16:22*	*1*
Nitrobenzene-d5	*75*		*41 - 120*	*08/28/17 07:13*	*08/29/17 16:22*	*1*
Phenol-d5	*97*		*46 - 125*	*08/28/17 07:13*	*08/29/17 16:22*	*1*
Terphenyl-d14	*96*		*35 - 160*	*08/28/17 07:13*	*08/29/17 16:22*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:20	1
Barium	**0.43**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:20	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:20	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:20	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:20	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:20	1
Copper	**0.010**	**J B**	0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:20	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:20	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:20	1
Manganese	**0.055**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:20	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:20	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:20	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:20	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:20	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:30	1
Barium	**0.38**	**J**	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:30	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:30	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:30	1
Chromium	**0.093**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:30	1
Cobalt	**0.012**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:30	1
Copper	**0.060**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:30	1
Iron	**66**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:30	1
Lead	**0.029**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:30	1
Manganese	**0.27**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:30	1
Nickel	**0.058**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:30	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:30	1

Client Sample ID: BP-2(0-6)-082217
Date Collected: 08/22/17 10:35
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-4
Matrix: Solid
Percent Solids: 79.4

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:30	1
Zinc	**0.15**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:30	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Arsenic	**5.7**		0.56	0.19	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Barium	**100**		0.56	0.063	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Beryllium	**0.80**		0.22	0.052	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Cadmium	**0.25**	**B**	0.11	0.020	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Calcium	**4300**	**B**	11	1.9	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Chromium	**17**		0.56	0.28	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Cobalt	**15**		0.28	0.073	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Copper	**18**		0.56	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Iron	**20000**	**B**	11	5.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Lead	**16**		0.28	0.13	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Magnesium	**3500**	**B**	5.6	2.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Manganese	**550**	**B**	0.56	0.081	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Nickel	**26**		0.56	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Potassium	**1500**		28	9.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Selenium	**0.67**		0.56	0.33	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Sodium	**120**		56	8.2	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Vanadium	**25**		0.28	0.066	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1
Zinc	**62**		1.1	0.49	mg/Kg	☼	08/28/17 09:27	08/28/17 20:39	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.23**		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 10:46	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**37**		20	6.6	ug/Kg	☼	08/24/17 08:25	08/24/17 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.2**		0.20	0.20	SU			08/23/17 16:41	1

Client Sample ID: BP-2(6-12)-082217
Date Collected: 08/22/17 10:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-5
Matrix: Solid
Percent Solids: 85.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<16		16	6.9	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Benzene	<1.6		1.6	0.40	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Bromodichloromethane	<1.6		1.6	0.32	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Bromoform	<1.6		1.6	0.46	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Bromomethane	<4.0		4.0	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Carbon disulfide	<4.0		4.0	0.82	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Carbon tetrachloride	<1.6		1.6	0.46	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Chlorobenzene	<1.6		1.6	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Chloroethane	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Chloroform	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Chloromethane	<4.0		4.0	1.6	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
cis-1,2-Dichloroethene	<1.6		1.6	0.44	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
cis-1,3-Dichloropropene	<1.6		1.6	0.48	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Dibromochloromethane	<1.6		1.6	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,1-Dichloroethane	<1.6		1.6	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,2-Dichloroethane	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,1-Dichloroethene	<1.6		1.6	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,2-Dichloropropane	<1.6		1.6	0.41	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,3-Dichloropropene, Total	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Ethylbenzene	<1.6		1.6	0.76	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
2-Hexanone	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Methylene Chloride	<4.0		4.0	1.6	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Methyl Ethyl Ketone	<4.0		4.0	1.8	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
methyl isobutyl ketone	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Methyl tert-butyl ether	<1.6		1.6	0.46	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Styrene	<1.6		1.6	0.48	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,1,2,2-Tetrachloroethane	<1.6		1.6	0.51	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Tetrachloroethene	<1.6		1.6	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Toluene	<1.6		1.6	0.40	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
trans-1,2-Dichloroethene	<1.6		1.6	0.70	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
trans-1,3-Dichloropropene	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,1,1-Trichloroethane	<1.6		1.6	0.53	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
1,1,2-Trichloroethane	<1.6		1.6	0.68	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Trichloroethene	<1.6		1.6	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Vinyl chloride	<1.6		1.6	0.70	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1
Xylenes, Total	<3.2		3.2	0.51	ug/Kg	☼	08/23/17 07:40	08/24/17 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 131*	*08/23/17 07:40*	*08/24/17 19:49*	*1*
Dibromofluoromethane	*102*		*75 - 126*	*08/23/17 07:40*	*08/24/17 19:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 134*	*08/23/17 07:40*	*08/24/17 19:49*	*1*
Toluene-d8 (Surr)	*103*		*75 - 124*	*08/23/17 07:40*	*08/24/17 19:49*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<190		190	41	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
1,2-Dichlorobenzene	<190		190	46	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
1,3-Dichlorobenzene	<190		190	43	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
1,4-Dichlorobenzene	<190		190	49	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2,2'-oxybis[1-chloropropane]	<190		190	44	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1

Client Sample ID: BP-2(6-12)-082217
Date Collected: 08/22/17 10:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-5
Matrix: Solid
Percent Solids: 85.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<380		380	88	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2,4,6-Trichlorophenol	<380		380	130	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2,4-Dichlorophenol	<380		380	91	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2,4-Dimethylphenol	<380		380	150	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2,4-Dinitrophenol	<770		770	680	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2,4-Dinitrotoluene	<190		190	61	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2,6-Dinitrotoluene	<190		190	75	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2-Chloronaphthalene	<190		190	42	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2-Chlorophenol	<190		190	66	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2-Methylnaphthalene	<77		77	7.1	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2-Methylphenol	<190		190	62	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2-Nitroaniline	<190		190	52	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
2-Nitrophenol	<380		380	91	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
3 & 4 Methylphenol	<190		190	64	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
3,3'-Dichlorobenzidine	<190		190	54	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
3-Nitroaniline	<380		380	120	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
4,6-Dinitro-2-methylphenol	<770		770	310	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
4-Bromophenyl phenyl ether	<190		190	51	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
4-Chloro-3-methylphenol	<380		380	130	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
4-Chloroaniline	<770		770	180	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
4-Chlorophenyl phenyl ether	<190		190	45	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
4-Nitroaniline	<380		380	160	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
4-Nitrophenol	<770		770	370	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Acenaphthene	<38		38	6.9	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Acenaphthylene	<38		38	5.1	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Anthracene	<38		38	6.4	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Benzo[a]anthracene	<38		38	5.2	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Benzo[a]pyrene	<38		38	7.4	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Benzo[b]fluoranthene	<38		38	8.3	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Benzo[g,h,i]perylene	**13**	**J**	38	12	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Benzo[k]fluoranthene	<38		38	11	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Bis(2-chloroethoxy)methane	<190		190	39	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Bis(2-chloroethyl)ether	<190		190	58	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Bis(2-ethylhexyl) phthalate	<190		190	70	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Butyl benzyl phthalate	<190		190	73	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Carbazole	<190		190	96	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Chrysene	**12**	**J**	38	10	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Dibenz(a,h)anthracene	<38		38	7.4	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Dibenzofuran	<190		190	45	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Diethyl phthalate	<190		190	65	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Dimethyl phthalate	<190		190	50	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Di-n-butyl phthalate	<190		190	58	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Di-n-octyl phthalate	<190		190	63	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Fluoranthene	<38		38	7.1	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Fluorene	<38		38	5.4	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Hexachlorobenzene	<77		77	8.9	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Hexachlorobutadiene	<190		190	60	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Hexachlorocyclopentadiene	<770		770	220	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Hexachloroethane	<190		190	58	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1

Client Sample ID: BP-2(6-12)-082217
Date Collected: 08/22/17 10:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-5
Matrix: Solid
Percent Solids: 85.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	<38		38	9.9	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Isophorone	<190		190	43	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Naphthalene	<38		38	5.9	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Nitrobenzene	<38		38	9.6	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
N-Nitrosodi-n-propylamine	<77		77	47	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
N-Nitrosodiphenylamine	<190		190	45	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Pentachlorophenol	<770		770	620	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Phenanthrene	<38		38	5.3	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Phenol	<190		190	85	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1
Pyrene	**16**	**J**	38	7.6	ug/Kg	☼	08/28/17 07:13	08/29/17 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*49*		*25 - 139*	*08/28/17 07:13*	*08/29/17 16:49*	*1*
2-Fluorobiphenyl	*71*		*44 - 121*	*08/28/17 07:13*	*08/29/17 16:49*	*1*
2-Fluorophenol	*80*		*46 - 133*	*08/28/17 07:13*	*08/29/17 16:49*	*1*
Nitrobenzene-d5	*71*		*41 - 120*	*08/28/17 07:13*	*08/29/17 16:49*	*1*
Phenol-d5	*77*		*46 - 125*	*08/28/17 07:13*	*08/29/17 16:49*	*1*
Terphenyl-d14	*102*		*35 - 160*	*08/28/17 07:13*	*08/29/17 16:49*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 19:16	1
Barium	**0.33**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 19:16	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 19:16	1
Cadmium	**0.0039**	**J**	0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 19:16	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:16	1
Cobalt	**0.012**	**J**	0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:16	1
Copper	**0.012**	**J**	0.050	0.010	mg/L		08/28/17 08:26	08/28/17 19:16	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 19:16	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 19:16	1
Manganese	**3.2**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:16	1
Nickel	**0.013**	**J**	0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:16	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 19:16	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:16	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 19:16	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.046**	**J**	0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:34	1
Barium	**0.45**	**J**	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:34	1
Beryllium	**0.0050**		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:34	1
Cadmium	**0.0022**	**J**	0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:34	1
Chromium	**0.13**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:34	1
Cobalt	**0.039**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:34	1
Copper	**0.13**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:34	1
Iron	**130**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:34	1
Lead	**0.063**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:34	1
Manganese	**0.58**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:34	1
Nickel	**0.15**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:34	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:34	1

Client Sample ID: BP-2(6-12)-082217
Date Collected: 08/22/17 10:40
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-5
Matrix: Solid
Percent Solids: 85.5

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:34	1
Zinc	**0.33**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:34	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Arsenic	**8.6**		0.58	0.20	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Barium	**40**		0.58	0.067	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Beryllium	**0.71**		0.23	0.055	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Cadmium	**0.27**	**B**	0.12	0.021	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Calcium	**120000**	**B**	120	20	mg/Kg	☼	08/28/17 09:27	08/29/17 12:40	10
Chromium	**15**		0.58	0.29	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Cobalt	**10**		0.29	0.077	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Copper	**24**		0.58	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Iron	**21000**	**B**	12	6.1	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Lead	**13**		0.29	0.14	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Magnesium	**23000**	**B**	5.8	2.9	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Manganese	**260**	**B**	0.58	0.085	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Nickel	**27**		0.58	0.17	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Potassium	**2300**		29	10	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Selenium	<0.58		0.58	0.34	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Sodium	**360**		58	8.7	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Vanadium	**19**		0.29	0.069	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1
Zinc	**63**		1.2	0.51	mg/Kg	☼	08/28/17 09:27	08/28/17 20:43	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 11:11	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**26**		17	5.6	ug/Kg	☼	08/24/17 08:25	08/24/17 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.7**		0.20	0.20	SU			08/23/17 16:41	1

Client Sample ID: BP-1(0-6)-082217
Date Collected: 08/22/17 11:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-6
Matrix: Solid
Percent Solids: 79.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	19		18	7.8	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Benzene	<1.8		1.8	0.46	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Bromodichloromethane	<1.8		1.8	0.36	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Bromoform	<1.8		1.8	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Bromomethane	<4.5		4.5	1.7	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Carbon disulfide	<4.5		4.5	0.93	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Carbon tetrachloride	<1.8		1.8	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Chlorobenzene	<1.8		1.8	0.66	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Chloroethane	<4.5		4.5	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Chloroform	<1.8		1.8	0.62	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Chloromethane	<4.5		4.5	1.8	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
cis-1,2-Dichloroethene	<1.8		1.8	0.50	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
cis-1,3-Dichloropropene	<1.8		1.8	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Dibromochloromethane	<1.8		1.8	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,1-Dichloroethane	<1.8		1.8	0.61	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,2-Dichloroethane	<4.5		4.5	1.4	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,1-Dichloroethene	<1.8		1.8	0.61	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,2-Dichloropropane	<1.8		1.8	0.46	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,3-Dichloropropene, Total	<1.8		1.8	0.63	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Ethylbenzene	<1.8		1.8	0.85	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
2-Hexanone	<4.5		4.5	1.4	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Methylene Chloride	<4.5		4.5	1.8	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Methyl Ethyl Ketone	<4.5		4.5	2.0	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
methyl isobutyl ketone	<4.5		4.5	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Methyl tert-butyl ether	<1.8		1.8	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Styrene	<1.8		1.8	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,1,2,2-Tetrachloroethane	<1.8		1.8	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Tetrachloroethene	<1.8		1.8	0.61	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Toluene	<1.8		1.8	0.45	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
trans-1,2-Dichloroethene	<1.8		1.8	0.79	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
trans-1,3-Dichloropropene	<1.8		1.8	0.63	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,1,1-Trichloroethane	<1.8		1.8	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
1,1,2-Trichloroethane	<1.8		1.8	0.77	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Trichloroethene	<1.8		1.8	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Vinyl chloride	<1.8		1.8	0.79	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1
Xylenes, Total	<3.6		3.6	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*75 - 131*	*08/23/17 07:40*	*08/24/17 20:14*	*1*
Dibromofluoromethane	*104*		*75 - 126*	*08/23/17 07:40*	*08/24/17 20:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 134*	*08/23/17 07:40*	*08/24/17 20:14*	*1*
Toluene-d8 (Surr)	*100*		*75 - 124*	*08/23/17 07:40*	*08/24/17 20:14*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<210		210	45	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
1,2-Dichlorobenzene	<210		210	50	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
1,3-Dichlorobenzene	<210		210	47	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
1,4-Dichlorobenzene	<210		210	54	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2,2'-oxybis[1-chloropropane]	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1

Client Sample ID: BP-1(0-6)-082217
Date Collected: 08/22/17 11:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-6
Matrix: Solid
Percent Solids: 79.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<420		420	96	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2,4,6-Trichlorophenol	<420		420	140	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2,4-Dichlorophenol	<420		420	100	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2,4-Dimethylphenol	<420		420	160	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2,4-Dinitrophenol	<850		850	740	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2,4-Dinitrotoluene	<210		210	67	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2,6-Dinitrotoluene	<210		210	83	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2-Chloronaphthalene	<210		210	46	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2-Chlorophenol	<210		210	72	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2-Methylnaphthalene	<85		85	7.7	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2-Methylphenol	<210		210	67	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2-Nitroaniline	<210		210	57	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
2-Nitrophenol	<420		420	99	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
3 & 4 Methylphenol	<210		210	70	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
3,3'-Dichlorobenzidine	<210		210	59	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
3-Nitroaniline	<420		420	130	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
4,6-Dinitro-2-methylphenol	<850		850	340	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
4-Bromophenyl phenyl ether	<210		210	55	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
4-Chloro-3-methylphenol	<420		420	140	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
4-Chloroaniline	<850		850	200	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
4-Chlorophenyl phenyl ether	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
4-Nitroaniline	<420		420	180	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
4-Nitrophenol	<850		850	400	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Acenaphthene	<42		42	7.6	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Acenaphthylene	<42		42	5.5	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Anthracene	**25**	**J**	42	7.0	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Benzo[a]anthracene	**160**		42	5.7	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Benzo[a]pyrene	**180**		42	8.1	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Benzo[b]fluoranthene	**210**		42	9.1	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Benzo[g,h,i]perylene	**120**		42	14	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Benzo[k]fluoranthene	**130**		42	12	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Bis(2-chloroethoxy)methane	<210		210	43	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Bis(2-chloroethyl)ether	<210		210	63	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Bis(2-ethylhexyl) phthalate	**150**	**J**	210	77	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Butyl benzyl phthalate	<210		210	80	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Carbazole	<210		210	110	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Chrysene	**190**		42	11	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Dibenz(a,h)anthracene	**20**	**J**	42	8.1	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Dibenzofuran	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Diethyl phthalate	<210		210	71	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Dimethyl phthalate	<210		210	55	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Di-n-butyl phthalate	<210		210	64	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Di-n-octyl phthalate	<210		210	69	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Fluoranthene	**390**		42	7.8	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Fluorene	**7.4**	**J**	42	5.9	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Hexachlorobenzene	<85		85	9.7	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Hexachlorobutadiene	<210		210	66	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Hexachlorocyclopentadiene	<850		850	240	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Hexachloroethane	<210		210	64	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1

Client Sample ID: BP-1(0-6)-082217
Date Collected: 08/22/17 11:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-6
Matrix: Solid
Percent Solids: 79.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**110**		42	11	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Isophorone	<210		210	47	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Naphthalene	<42		42	6.5	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Nitrobenzene	<42		42	10	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
N-Nitrosodi-n-propylamine	<85		85	51	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
N-Nitrosodiphenylamine	<210		210	50	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Pentachlorophenol	<850		850	670	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Phenanthrene	**180**		42	5.9	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Phenol	<210		210	93	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1
Pyrene	**350**		42	8.3	ug/Kg	☼	08/28/17 07:13	08/29/17 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*27*		*25 - 139*	*08/28/17 07:13*	*08/29/17 19:30*	*1*
2-Fluorobiphenyl	*64*		*44 - 121*	*08/28/17 07:13*	*08/29/17 19:30*	*1*
2-Fluorophenol	*68*		*46 - 133*	*08/28/17 07:13*	*08/29/17 19:30*	*1*
Nitrobenzene-d5	*59*		*41 - 120*	*08/28/17 07:13*	*08/29/17 19:30*	*1*
Phenol-d5	*64*		*46 - 125*	*08/28/17 07:13*	*08/29/17 19:30*	*1*
Terphenyl-d14	*73*		*35 - 160*	*08/28/17 07:13*	*08/29/17 19:30*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:24	1
Barium	**0.43**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:24	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:24	1
Cadmium	**0.0020**	**J**	0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:24	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:24	1
Cobalt	**0.014**	**J**	0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:24	1
Copper	**0.029**	**J B**	0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:24	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:24	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:24	1
Manganese	**4.0**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:24	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:24	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:24	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:24	1
Zinc	**0.034**	**J B**	0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:24	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:38	1
Barium	**0.082**	**J**	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:38	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:38	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:38	1
Chromium	**0.016**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:38	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:38	1
Copper	**0.028**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:38	1
Iron	**12**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:38	1
Lead	**0.014**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:38	1
Manganese	**0.090**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:38	1
Nickel	**0.014**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:38	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:38	1

Client Sample ID: BP-1(0-6)-082217
Date Collected: 08/22/17 11:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-6
Matrix: Solid
Percent Solids: 79.0

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:38	1
Zinc	**0.034**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:38	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.22	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Arsenic	**7.3**		0.58	0.20	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Barium	**58**		0.58	0.066	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Beryllium	**0.84**		0.23	0.054	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Cadmium	**0.22**	**B**	0.12	0.021	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Calcium	**34000**	**B**	12	2.0	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Chromium	**17**		0.58	0.29	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Cobalt	**15**		0.29	0.076	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Copper	**25**		0.58	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Iron	**22000**	**B**	12	6.0	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Lead	**21**		0.29	0.13	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Magnesium	**20000**	**B**	5.8	2.9	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Manganese	**400**	**B**	0.58	0.084	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Nickel	**34**		0.58	0.17	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Potassium	**2100**		29	10	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Selenium	<0.58		0.58	0.34	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Sodium	**340**		58	8.5	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Vanadium	**21**		0.29	0.068	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1
Zinc	**72**		1.2	0.51	mg/Kg	☼	08/28/17 09:27	08/28/17 20:47	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 11:02	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:35	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**17**	**J**	19	6.3	ug/Kg	☼	08/24/17 08:25	08/24/17 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.9**		0.20	0.20	SU			08/23/17 16:41	1

Client Sample ID: BP-1(6-12)-082217
Date Collected: 08/22/17 11:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-7
Matrix: Solid
Percent Solids: 76.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<20		20	8.6	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Benzene	<2.0		2.0	0.50	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Bromodichloromethane	<2.0		2.0	0.40	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Bromoform	<2.0		2.0	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Bromomethane	<5.0		5.0	1.9	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Carbon disulfide	<5.0		5.0	1.0	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Carbon tetrachloride	<2.0		2.0	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Chlorobenzene	<2.0		2.0	0.73	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Chloroethane	<5.0		5.0	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Chloroform	<2.0		2.0	0.69	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Chloromethane	<5.0		5.0	2.0	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
cis-1,2-Dichloroethene	<2.0		2.0	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
cis-1,3-Dichloropropene	<2.0		2.0	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Dibromochloromethane	<2.0		2.0	0.65	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,1-Dichloroethane	<2.0		2.0	0.68	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,2-Dichloroethane	<5.0		5.0	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,1-Dichloroethene	<2.0		2.0	0.68	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,2-Dichloropropane	<2.0		2.0	0.51	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,3-Dichloropropene, Total	<2.0		2.0	0.70	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Ethylbenzene	<2.0		2.0	0.95	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
2-Hexanone	<5.0		5.0	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Methylene Chloride	<5.0		5.0	2.0	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Methyl Ethyl Ketone	<5.0		5.0	2.2	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
methyl isobutyl ketone	<5.0		5.0	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Methyl tert-butyl ether	<2.0		2.0	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Styrene	<2.0		2.0	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,1,2,2-Tetrachloroethane	<2.0		2.0	0.63	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Tetrachloroethene	<2.0		2.0	0.67	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Toluene	<2.0		2.0	0.50	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
trans-1,2-Dichloroethene	<2.0		2.0	0.88	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
trans-1,3-Dichloropropene	<2.0		2.0	0.70	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,1,1-Trichloroethane	<2.0		2.0	0.66	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
1,1,2-Trichloroethane	<2.0		2.0	0.85	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Trichloroethene	<2.0		2.0	0.67	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Vinyl chloride	<2.0		2.0	0.88	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1
Xylenes, Total	<4.0		4.0	0.63	ug/Kg	☼	08/23/17 07:40	08/24/17 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*75 - 131*	*08/23/17 07:40*	*08/24/17 20:39*	*1*
Dibromofluoromethane	*103*		*75 - 126*	*08/23/17 07:40*	*08/24/17 20:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 134*	*08/23/17 07:40*	*08/24/17 20:39*	*1*
Toluene-d8 (Surr)	*98*		*75 - 124*	*08/23/17 07:40*	*08/24/17 20:39*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<220		220	47	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
1,2-Dichlorobenzene	<220		220	52	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
1,3-Dichlorobenzene	<220		220	49	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
1,4-Dichlorobenzene	<220		220	55	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2,2'-oxybis[1-chloropropane]	<220		220	50	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1

Client Sample ID: BP-1(6-12)-082217
Date Collected: 08/22/17 11:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-7
Matrix: Solid
Percent Solids: 76.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<430		430	99	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2,4,6-Trichlorophenol	<430		430	150	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2,4-Dichlorophenol	<430		430	100	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2,4-Dimethylphenol	<430		430	160	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2,4-Dinitrophenol	<870		870	760	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2,4-Dinitrotoluene	<220		220	69	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2,6-Dinitrotoluene	<220		220	85	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2-Chloronaphthalene	<220		220	48	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2-Chlorophenol	<220		220	74	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2-Methylnaphthalene	<87		87	8.0	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2-Methylphenol	<220		220	69	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2-Nitroaniline	<220		220	58	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
2-Nitrophenol	<430		430	100	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
3 & 4 Methylphenol	<220		220	72	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
3,3'-Dichlorobenzidine	<220		220	61	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
3-Nitroaniline	<430		430	130	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
4,6-Dinitro-2-methylphenol	<870		870	350	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
4-Bromophenyl phenyl ether	<220		220	57	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
4-Chloro-3-methylphenol	<430		430	150	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
4-Chloroaniline	<870		870	200	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
4-Chlorophenyl phenyl ether	<220		220	51	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
4-Nitroaniline	<430		430	180	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
4-Nitrophenol	<870		870	410	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Acenaphthene	<43		43	7.8	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Acenaphthylene	<43		43	5.7	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Anthracene	<43		43	7.2	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Benzo[a]anthracene	<43		43	5.8	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Benzo[a]pyrene	<43		43	8.4	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Benzo[b]fluoranthene	<43		43	9.3	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Benzo[g,h,i]perylene	<43		43	14	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Benzo[k]fluoranthene	<43		43	13	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Bis(2-chloroethoxy)methane	<220		220	44	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Bis(2-chloroethyl)ether	<220		220	65	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Bis(2-ethylhexyl) phthalate	<220		220	79	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Butyl benzyl phthalate	<220		220	82	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Carbazole	<220		220	110	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Chrysene	<43		43	12	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Dibenz(a,h)anthracene	<43		43	8.4	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Dibenzofuran	<220		220	51	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Diethyl phthalate	<220		220	73	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Dimethyl phthalate	<220		220	57	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Di-n-butyl phthalate	<220		220	66	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Di-n-octyl phthalate	<220		220	71	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Fluoranthene	<43		43	8.0	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Fluorene	<43		43	6.1	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Hexachlorobenzene	<87		87	10	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Hexachlorobutadiene	<220		220	68	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Hexachlorocyclopentadiene	<870		870	250	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Hexachloroethane	<220		220	66	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1

Client Sample ID: BP-1(6-12)-082217
Date Collected: 08/22/17 11:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-7
Matrix: Solid
Percent Solids: 76.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	<43		43	11	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Isophorone	<220		220	49	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Naphthalene	<43		43	6.7	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Nitrobenzene	<43		43	11	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
N-Nitrosodi-n-propylamine	<87		87	53	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
N-Nitrosodiphenylamine	<220		220	51	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Pentachlorophenol	<870		870	690	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Phenanthrene	<43		43	6.0	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Phenol	<220		220	96	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1
Pyrene	<43		43	8.6	ug/Kg	☼	08/28/17 07:13	08/29/17 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*48*		*25 - 139*	*08/28/17 07:13*	*08/29/17 17:16*	*1*
2-Fluorobiphenyl	*62*		*44 - 121*	*08/28/17 07:13*	*08/29/17 17:16*	*1*
2-Fluorophenol	*85*		*46 - 133*	*08/28/17 07:13*	*08/29/17 17:16*	*1*
Nitrobenzene-d5	*63*		*41 - 120*	*08/28/17 07:13*	*08/29/17 17:16*	*1*
Phenol-d5	*84*		*46 - 125*	*08/28/17 07:13*	*08/29/17 17:16*	*1*
Terphenyl-d14	*91*		*35 - 160*	*08/28/17 07:13*	*08/29/17 17:16*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:28	1
Barium	**0.36**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:28	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:28	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:28	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:28	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:28	1
Copper	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:28	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:28	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:28	1
Manganese	**0.88**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:28	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:28	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:28	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:28	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:28	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:49	1
Barium	**0.18**	**J**	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:49	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:49	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:49	1
Chromium	**0.038**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:49	1
Cobalt	**0.011**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:49	1
Copper	**0.035**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:49	1
Iron	**25**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:49	1
Lead	**0.018**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:49	1
Manganese	**0.15**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:49	1
Nickel	**0.034**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:49	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:49	1

Client Sample ID: BP-1(6-12)-082217
Date Collected: 08/22/17 11:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-7
Matrix: Solid
Percent Solids: 76.5

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:49	1
Zinc	**0.075**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:49	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Arsenic	**11**		0.56	0.19	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Barium	**66**		0.56	0.064	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Beryllium	**0.92**		0.22	0.052	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Cadmium	**0.26**	**B**	0.11	0.020	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Calcium	**5700**	**B**	11	1.9	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Chromium	**19**		0.56	0.28	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Cobalt	**17**		0.28	0.073	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Copper	**22**		0.56	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Iron	**28000**	**B**	11	5.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Lead	**17**		0.28	0.13	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Magnesium	**5900**	**B**	5.6	2.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Manganese	**140**	**B**	0.56	0.081	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Nickel	**39**		0.56	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Potassium	**1800**		28	9.9	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Sodium	**180**		56	8.3	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Vanadium	**32**		0.28	0.066	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1
Zinc	**73**		1.1	0.49	mg/Kg	☼	08/28/17 09:27	08/28/17 20:51	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 11:04	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**30**		22	7.2	ug/Kg	☼	08/24/17 08:25	08/24/17 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.2**		0.20	0.20	SU			08/23/17 16:41	1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	1,3-Dichloropropene, Total
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604
Phone: 708.534.5200 Fax: 708.534.

500-132979 COC

Chain of Custody Record

Lab Job #: 500-132979

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler: 2.5

(optional) Report To		(optional) Bill To	
Contact:	S. BabuSuKumar	Contact:	SAME
Company:	Weston Solutions Inc	Company:	
Address:	300 Plaza Circle, Ste 202	Address:	
Address:	Mundelein, IL 60060	Address:	
Phone:	224-864-7200	Phone:	
Fax:	224-864-7236	Fax:	
E-Mail:		PO#/Reference#	

Client	Client Project #
Weston Solutions Inc	02056-014-061.0030
Project Name	
IDOT 061-IL 19 at East Ave	
Project Location/State	Lab Project #
Streamwood, IL	
Sampler	Lab PM
M. Doheny-Skubic	D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	pH					Comments
1		CB7-1(0-6)-082217	8/22/17	1000	5	S		X	X	X	X	X					
2		CB7-1(0-6)-082217D		1000													
3		CB7-1(6-10)-082217		1005													
4		BP-2(0-6)-082217		1035													
5		BP-2(6-12)-082217		1040													
6		BP-1(0-6)-082217		1100													
7		BP-1(6-12)-082217		1105													
8		FA-1(0-6)-082217		1118													
9		FA-1(6-12)-082217		1122													
10		CB4-1(0-6)-082217	8/22/17	1140	5	S		X	X	X	X	X					

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/17	1400	[illegible]	TA	8/22/17	1400
[illegible]	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key

WW – Wastewater	SE – Sediment
W – Water	SO – Soil
S – Soil	L – Leachate
SL – Sludge	WI – Wipe
MS – Miscellaneous	DW – Drinking Water
OL – Oil	O – Other
A – Air	

Client Comments

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact: S. Babusukumar
Company: Weston Solutions Inc.
Address: 300 Plaza Circle, Ste. 202
Address: Mundelein, IL 60060
Phone: 224-864-7200
Fax: 224-864-7236
E-Mail:

(optional)
Bill To
Contact: SAME
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-132979
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler:

Client: Weston Solutions
Client Project #: 02056.014.061.0030
Project Name: IDOT 061-IL 19 at East Ave
Project Location/State: Streamwood, IL
Lab Project #:
Sampler: M. Doherty-Skubic
Lab PM: D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	TPH					Comments
11		CB4-1(6-12)-082217	8/22/17	1145	5	S		X	X	X	X	X					
☆	AD	LAST ITEM															MS
																	MSD
																	MS
																	MS
																	MS
																	MS
																	MS
																	MS

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days ___ Other
Requested Due Date

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for ___ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/2017	1400	[illegible]	TA	8/22/17	1400
P. Neal	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

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: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave. Office Phone Number, if available: _____

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

1960 Irving Park Road (ISGS Site No. 3118-6)

City: Hanover Park State: IL Zip Code: _____

County: Cook Township: _____

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

Latitude: 42.008107415 (Decimal Degrees) Longitude: -88.153817046 (-Decimal Degrees)

Identify how the lat/long data were determined:

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

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

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	Illinois Department of Transportation	Name:	Illinois Department of Transportation
Street Address:	201 West Center Court	Street Address:	201 West Center Court
PO Box:		PO Box:	
City:	Schaumburg State: IL	City:	Schaumburg State: IL
Zip Code:	60196-1096 Phone: 847-705-4101	Zip Code:	60196-1096 Phone: 847-705-4101
Contact:	Sam Mead	Contact:	Sam Mead
Email, if available:	Sam.Mead@illinois.gov	Email, if available:	Sam.Mead@illinois.gov

Project Name: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave.

Latitude: 42.008107415 Longitude: -88.153817046

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)]:

LOCATION FA-1 WAS SAMPLED ADJACENT TO ISGS SITE No. 3118-6. SEE FIGURE 3-1 AND TABLE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

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

TESTAMERICA ANALYTICAL REPORT - JOB ID: 500-132979-1.
ALSO SEE FIGURE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

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

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

Company Name: Weston Solutions, Inc.

Street Address: 300 Circle Plaza; Suite 202

City: Mundelein State: IL Zip Code: 60060

Phone: (224) 864-7200

Michael Castillo, P.G.
Printed Name:

Michael A. Castillo
Licensed Professional Engineer or
Licensed Professional Geologist Signature:

26 September 2017
Date:

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

Summary Table of ISGS Site No. 3118-6
Comparison of Detected Constituents to Applicable Reference Concentrations
Soil Analytical Results
Illinois Department of Transportation
FAU 1321: IL Route 19 - Irving Park Road at East Avenue
Streamwood, Cook County, Illinois

Field Sample ID	FA-1(0-6)-082217	FA-1(6-12)-082217	**Soil Reference Concentrations[A]**
Sample Date	8/22/2017	8/22/2017	
Location ID	FA-1	FA-1	
Depth	0 - 6	6 - 12	
ISGS Site No.	3118-6	3118-6	
Parameter			
Laboratory pH (s.u.)	8.7	8.2	<6.25; >9.0
VOCs	**None Detected**		
SVOCs (ug/kg)			
Benzo(a)anthracene	17 J	ND	900 / 1100 / 1800
Benzo(a)pyrene	21 J	ND	90 / 1300 / 2100
Benzo(b)fluoranthene	39 J	ND	900 / 1500 / 2100
Benzo(g,h,i)perylene	29 J	13 J	---
Benzo(k)fluoranthene	18 J	ND	9000
Chrysene	28 J	22 J	88000
Fluoranthene	30 J	7 J	3100000
Indeno(1,2,3-cd)pyrene	24 J	ND	900 / 900 / 1600
Phenanthrene	12 J	36 J	---
Pyrene	34 J	17 J	2300000
Total Metals (mg/kg)			
Arsenic, Total	6.5	4.2	11.3 / 13.0
Barium, Total	57	32	1500
Beryllium, Total	0.81	0.7	22
Cadmium, Total	0.25 B	ND	5.2
Calcium, Total	77000 B	95000 B	---
Chromium, Total	17	16	21
Cobalt, Total	11	11	20
Copper, Total	28	24	2900
Lead, Total	77	13	107
Magnesium, Total	24000 B	26000 B	325000
Manganese, Total	270 B	320 B	630 / 636
Mercury, Total	0.034	0.021	0.89
Nickel, Total	29	32	100
Potassium, Total	1800	2600	---
Sodium, Total	1800	310	---
Vanadium, Total	22	16	550
Zinc, Total	89	57	5100
TCLP Metals (mg/l)			
Barium, TCLP	0.36 J	0.31 J	2
Cadmium, TCLP	0.0027 J	0.0039 J	0.005
Cobalt, TCLP	ND	0.02 J	1
Lead, TCLP	0.011	ND	0.0075
Manganese, TCLP	1	3.7	0.15
Nickel, TCLP	ND	0.016 J	0.1
Zinc, SPLP	0.61	0.18 J	5
SPLP Metals (mg/l)			
Arsenic, SPLP	0.056	0.017 J	0.05
Barium, SPLP	0.78	0.27 J	2
Beryllium, SPLP	0.0074	ND	0.004
Cadmium, SPLP	0.0031 J	ND	0.005
Chromium, SPLP	0.15	0.071	0.1
Cobalt, SPLP	0.069	0.024 J	1
Copper, SPLP	0.2	0.083	0.65
Lead, SPLP	0.6	0.041	0.0075
Manganese, SPLP	1.2	0.36	0.15
Mercury, SPLP	0.00033	ND	0.002
Nickel, SPLP	0.2	0.084	0.1

Notes:

--- - not applicable or value not available.

[A] - Soil reference concentrations from MAC Table. Background values for Chicago corporate limits and MSA counties ar

ND - Constituent not detected above the reporting limit.

B - Constituent detected in the laboratory blank and investigative samples.

J - Estimated concentration.

Shaded values indicate concentration **exceeds** Reference Concentration.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-132979-1
Client Project/Site: IDOT - Streamwood - WO 061

For:
Weston Solutions, Inc.
300 Plaza Circle, Suite 202
Mundelein, Illinois 60060

Attn: Mr. S. Babusukumar

Authorized for release by:
8/31/2017 10:40:36 AM

Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

Client Sample Results

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Client Sample ID: FA-1(0-6)-082217
Date Collected: 08/22/17 11:18
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-8
Matrix: Solid
Percent Solids: 80.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<16		16	7.0	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Benzene	<1.6		1.6	0.41	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Bromodichloromethane	<1.6		1.6	0.33	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Bromoform	<1.6		1.6	0.47	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Bromomethane	<4.0		4.0	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Carbon disulfide	<4.0		4.0	0.84	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Carbon tetrachloride	<1.6		1.6	0.47	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Chlorobenzene	<1.6		1.6	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Chloroethane	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Chloroform	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Chloromethane	<4.0		4.0	1.6	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
cis-1,2-Dichloroethene	<1.6		1.6	0.45	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
cis-1,3-Dichloropropene	<1.6		1.6	0.49	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Dibromochloromethane	<1.6		1.6	0.53	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,1-Dichloroethane	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,2-Dichloroethane	<4.0		4.0	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,1-Dichloroethene	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,2-Dichloropropane	<1.6		1.6	0.42	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,3-Dichloropropene, Total	<1.6		1.6	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Ethylbenzene	<1.6		1.6	0.77	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
2-Hexanone	<4.0		4.0	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Methylene Chloride	<4.0		4.0	1.6	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Methyl Ethyl Ketone	<4.0		4.0	1.8	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
methyl isobutyl ketone	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Methyl tert-butyl ether	<1.6		1.6	0.47	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Styrene	<1.6		1.6	0.49	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,1,2,2-Tetrachloroethane	<1.6		1.6	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Tetrachloroethene	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Toluene	<1.6		1.6	0.41	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
trans-1,2-Dichloroethene	<1.6		1.6	0.72	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
trans-1,3-Dichloropropene	<1.6		1.6	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,1,1-Trichloroethane	<1.6		1.6	0.54	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
1,1,2-Trichloroethane	<1.6		1.6	0.69	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Trichloroethene	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Vinyl chloride	<1.6		1.6	0.72	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1
Xylenes, Total	<3.2		3.2	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 131*	*08/23/17 07:40*	*08/24/17 21:04*	*1*
Dibromofluoromethane	*103*		*75 - 126*	*08/23/17 07:40*	*08/24/17 21:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 134*	*08/23/17 07:40*	*08/24/17 21:04*	*1*
Toluene-d8 (Surr)	*100*		*75 - 124*	*08/23/17 07:40*	*08/24/17 21:04*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<210		210	44	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
1,2-Dichlorobenzene	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
1,3-Dichlorobenzene	<210		210	46	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
1,4-Dichlorobenzene	<210		210	53	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2,2'-oxybis[1-chloropropane]	<210		210	48	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Client Sample ID: FA-1(0-6)-082217
Date Collected: 08/22/17 11:18
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-8
Matrix: Solid
Percent Solids: 80.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<410		410	94	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2,4,6-Trichlorophenol	<410		410	140	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2,4-Dichlorophenol	<410		410	98	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2,4-Dimethylphenol	<410		410	160	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2,4-Dinitrophenol	<830		830	720	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2,4-Dinitrotoluene	<210		210	65	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2,6-Dinitrotoluene	<210		210	81	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2-Chloronaphthalene	<210		210	45	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2-Chlorophenol	<210		210	70	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2-Methylnaphthalene	<83		83	7.6	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2-Methylphenol	<210		210	66	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2-Nitroaniline	<210		210	55	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
2-Nitrophenol	<410		410	97	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
3 & 4 Methylphenol	<210		210	69	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
3,3'-Dichlorobenzidine	<210		210	58	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
3-Nitroaniline	<410		410	130	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
4,6-Dinitro-2-methylphenol	<830		830	330	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
4-Bromophenyl phenyl ether	<210		210	54	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
4-Chloro-3-methylphenol	<410		410	140	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
4-Chloroaniline	<830		830	190	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
4-Chlorophenyl phenyl ether	<210		210	48	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
4-Nitroaniline	<410		410	170	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
4-Nitrophenol	<830		830	390	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Acenaphthene	<41		41	7.4	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Acenaphthylene	<41		41	5.4	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Anthracene	<41		41	6.9	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Benzo[a]anthracene	**17**	**J**	41	5.5	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Benzo[a]pyrene	**21**	**J**	41	8.0	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Benzo[b]fluoranthene	**39**	**J**	41	8.9	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Benzo[g,h,i]perylene	**29**	**J**	41	13	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Benzo[k]fluoranthene	**18**	**J**	41	12	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Bis(2-chloroethoxy)methane	<210		210	42	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Bis(2-chloroethyl)ether	<210		210	62	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Bis(2-ethylhexyl) phthalate	<210		210	75	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Butyl benzyl phthalate	<210		210	78	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Carbazole	<210		210	100	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Chrysene	**28**	**J**	41	11	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Dibenz(a,h)anthracene	<41		41	7.9	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Dibenzofuran	<210		210	48	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Diethyl phthalate	<210		210	70	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Dimethyl phthalate	<210		210	54	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Di-n-butyl phthalate	<210		210	63	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Di-n-octyl phthalate	<210		210	67	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Fluoranthene	**30**	**J**	41	7.6	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Fluorene	<41		41	5.8	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Hexachlorobenzene	<83		83	9.5	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Hexachlorobutadiene	<210		210	65	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Hexachlorocyclopentadiene	<830		830	240	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Hexachloroethane	<210		210	63	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1

Client Sample ID: FA-1(0-6)-082217
Date Collected: 08/22/17 11:18
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-8
Matrix: Solid
Percent Solids: 80.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**24**	**J**	41	11	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Isophorone	<210		210	46	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Naphthalene	<41		41	6.3	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Nitrobenzene	<41		41	10	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
N-Nitrosodi-n-propylamine	<83		83	50	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
N-Nitrosodiphenylamine	<210		210	49	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Pentachlorophenol	<830		830	660	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Phenanthrene	**12**	**J**	41	5.7	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Phenol	<210		210	91	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1
Pyrene	**34**	**J**	41	8.2	ug/Kg	☼	08/28/17 07:13	08/29/17 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*49*		*25 - 139*	*08/28/17 07:13*	*08/29/17 19:03*	*1*
2-Fluorobiphenyl	*86*		*44 - 121*	*08/28/17 07:13*	*08/29/17 19:03*	*1*
2-Fluorophenol	*93*		*46 - 133*	*08/28/17 07:13*	*08/29/17 19:03*	*1*
Nitrobenzene-d5	*93*		*41 - 120*	*08/28/17 07:13*	*08/29/17 19:03*	*1*
Phenol-d5	*94*		*46 - 125*	*08/28/17 07:13*	*08/29/17 19:03*	*1*
Terphenyl-d14	*97*		*35 - 160*	*08/28/17 07:13*	*08/29/17 19:03*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:32	1
Barium	**0.36**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:32	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:32	1
Cadmium	**0.0027**	**J**	0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:32	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:32	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:32	1
Copper	**0.016**	**J B**	0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:32	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:32	1
Lead	**0.011**		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:32	1
Manganese	**1.0**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:32	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:32	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:32	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:32	1
Zinc	**0.023**	**J B**	0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:32	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.056**		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:53	1
Barium	**0.78**		0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:53	1
Beryllium	**0.0074**		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:53	1
Cadmium	**0.0031**	**J**	0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:53	1
Chromium	**0.15**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:53	1
Cobalt	**0.069**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:53	1
Copper	**0.20**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:53	1
Iron	**150**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:53	1
Lead	**0.60**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:53	1
Manganese	**1.2**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:53	1
Nickel	**0.20**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:53	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:53	1

Client Sample ID: FA-1(0-6)-082217
Date Collected: 08/22/17 11:18
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-8
Matrix: Solid
Percent Solids: 80.1

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:53	1
Zinc	**0.61**		0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:53	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Arsenic	**6.5**		0.56	0.19	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Barium	**57**		0.56	0.063	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Beryllium	**0.81**		0.22	0.052	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Cadmium	**0.25**	**B**	0.11	0.020	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Calcium	**77000**	**B**	110	19	mg/Kg	☼	08/28/17 09:27	08/29/17 12:44	10
Chromium	**17**		0.56	0.28	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Cobalt	**11**		0.28	0.073	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Copper	**28**		0.56	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Iron	**20000**	**B**	11	5.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Lead	**77**		0.28	0.13	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Magnesium	**24000**	**B**	5.6	2.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Manganese	**270**	**B**	0.56	0.081	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Nickel	**29**		0.56	0.16	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Potassium	**1800**		28	9.9	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Sodium	**1800**		56	8.2	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Vanadium	**22**		0.28	0.066	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1
Zinc	**89**		1.1	0.49	mg/Kg	☼	08/28/17 09:27	08/28/17 20:55	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 11:05	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.33**		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:38	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**34**		19	6.5	ug/Kg	☼	08/24/17 08:25	08/24/17 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.7**		0.20	0.20	SU			08/23/17 16:41	1

Client Sample ID: FA-1(6-12)-082217
Date Collected: 08/22/17 11:22
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-9
Matrix: Solid
Percent Solids: 85.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<16		16	7.0	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Benzene	<1.6		1.6	0.41	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Bromodichloromethane	<1.6		1.6	0.33	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Bromoform	<1.6		1.6	0.47	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Bromomethane	<4.0		4.0	1.5	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Carbon disulfide	<4.0		4.0	0.83	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Carbon tetrachloride	<1.6		1.6	0.46	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Chlorobenzene	<1.6		1.6	0.59	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Chloroethane	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Chloroform	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Chloromethane	<4.0		4.0	1.6	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
cis-1,2-Dichloroethene	<1.6		1.6	0.45	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
cis-1,3-Dichloropropene	<1.6		1.6	0.48	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Dibromochloromethane	<1.6		1.6	0.52	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,1-Dichloroethane	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,2-Dichloroethane	<4.0		4.0	1.3	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,1-Dichloroethene	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,2-Dichloropropane	<1.6		1.6	0.41	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,3-Dichloropropene, Total	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Ethylbenzene	<1.6		1.6	0.77	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
2-Hexanone	<4.0		4.0	1.3	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Methylene Chloride	<4.0		4.0	1.6	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Methyl Ethyl Ketone	<4.0		4.0	1.8	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
methyl isobutyl ketone	<4.0		4.0	1.2	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Methyl tert-butyl ether	<1.6		1.6	0.47	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Styrene	<1.6		1.6	0.48	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,1,2,2-Tetrachloroethane	<1.6		1.6	0.51	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Tetrachloroethene	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Toluene	<1.6		1.6	0.40	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
trans-1,2-Dichloroethene	<1.6		1.6	0.71	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
trans-1,3-Dichloropropene	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,1,1-Trichloroethane	<1.6		1.6	0.54	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
1,1,2-Trichloroethane	<1.6		1.6	0.69	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Trichloroethene	<1.6		1.6	0.54	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Vinyl chloride	<1.6		1.6	0.71	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1
Xylenes, Total	<3.2		3.2	0.51	ug/Kg	☼	08/23/17 07:40	08/25/17 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*75 - 131*	*08/23/17 07:40*	*08/25/17 15:42*	*1*
Dibromofluoromethane	*102*		*75 - 126*	*08/23/17 07:40*	*08/25/17 15:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 134*	*08/23/17 07:40*	*08/25/17 15:42*	*1*
Toluene-d8 (Surr)	*102*		*75 - 124*	*08/23/17 07:40*	*08/25/17 15:42*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<190		190	40	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
1,2-Dichlorobenzene	<190		190	44	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
1,3-Dichlorobenzene	<190		190	42	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
1,4-Dichlorobenzene	<190		190	48	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2,2'-oxybis[1-chloropropane]	<190		190	43	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1

Client Sample ID: FA-1(6-12)-082217
Date Collected: 08/22/17 11:22
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-9
Matrix: Solid
Percent Solids: 85.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<370		370	85	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2,4,6-Trichlorophenol	<370		370	130	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2,4-Dichlorophenol	<370		370	88	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2,4-Dimethylphenol	<370		370	140	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2,4-Dinitrophenol	<750		750	660	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2,4-Dinitrotoluene	<190		190	59	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2,6-Dinitrotoluene	<190		190	73	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2-Chloronaphthalene	<190		190	41	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2-Chlorophenol	<190		190	64	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2-Methylnaphthalene	<75		75	6.8	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2-Methylphenol	<190		190	60	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2-Nitroaniline	<190		190	50	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
2-Nitrophenol	<370		370	88	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
3 & 4 Methylphenol	<190		190	62	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
3,3'-Dichlorobenzidine	<190		190	52	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
3-Nitroaniline	<370		370	120	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
4,6-Dinitro-2-methylphenol	<750		750	300	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
4-Bromophenyl phenyl ether	<190		190	49	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
4-Chloro-3-methylphenol	<370		370	130	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
4-Chloroaniline	<750		750	170	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
4-Chlorophenyl phenyl ether	<190		190	43	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
4-Nitroaniline	<370		370	160	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
4-Nitrophenol	<750		750	350	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Acenaphthene	<37		37	6.7	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Acenaphthylene	<37		37	4.9	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Anthracene	<37		37	6.2	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Benzo[a]anthracene	<37		37	5.0	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Benzo[a]pyrene	<37		37	7.2	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Benzo[b]fluoranthene	<37		37	8.0	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Benzo[g,h,i]perylene	**13**	**J**	37	12	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Benzo[k]fluoranthene	<37		37	11	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Bis(2-chloroethoxy)methane	<190		190	38	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Bis(2-chloroethyl)ether	<190		190	56	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Bis(2-ethylhexyl) phthalate	<190		190	68	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Butyl benzyl phthalate	<190		190	71	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Carbazole	<190		190	93	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Chrysene	**22**	**J**	37	10	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Dibenz(a,h)anthracene	<37		37	7.2	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Dibenzofuran	<190		190	44	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Diethyl phthalate	<190		190	63	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Dimethyl phthalate	<190		190	49	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Di-n-butyl phthalate	<190		190	57	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Di-n-octyl phthalate	<190		190	61	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Fluoranthene	**7.0**	**J**	37	6.9	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Fluorene	<37		37	5.2	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Hexachlorobenzene	<75		75	8.6	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Hexachlorobutadiene	<190		190	59	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Hexachlorocyclopentadiene	<750		750	210	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Hexachloroethane	<190		190	57	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1

Client Sample ID: FA-1(6-12)-082217
Date Collected: 08/22/17 11:22
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-9
Matrix: Solid
Percent Solids: 85.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	<37		37	9.7	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Isophorone	<190		190	42	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Naphthalene	<37		37	5.7	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Nitrobenzene	<37		37	9.3	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
N-Nitrosodi-n-propylamine	<75		75	46	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
N-Nitrosodiphenylamine	<190		190	44	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Pentachlorophenol	<750		750	600	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Phenanthrene	**36**	**J**	37	5.2	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Phenol	<190		190	83	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1
Pyrene	**17**	**J**	37	7.4	ug/Kg	☼	08/28/17 07:13	08/30/17 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*63*		*25 - 139*	*08/28/17 07:13*	*08/30/17 14:01*	*1*
2-Fluorobiphenyl	*75*		*44 - 121*	*08/28/17 07:13*	*08/30/17 14:01*	*1*
2-Fluorophenol	*98*		*46 - 133*	*08/28/17 07:13*	*08/30/17 14:01*	*1*
Nitrobenzene-d5	*70*		*41 - 120*	*08/28/17 07:13*	*08/30/17 14:01*	*1*
Phenol-d5	*83*		*46 - 125*	*08/28/17 07:13*	*08/30/17 14:01*	*1*
Terphenyl-d14	*86*		*35 - 160*	*08/28/17 07:13*	*08/30/17 14:01*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 19:19	1
Barium	**0.31**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 19:19	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 19:19	1
Cadmium	**0.0039**	**J**	0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 19:19	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:19	1
Cobalt	**0.020**	**J**	0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:19	1
Copper	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 19:19	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 19:19	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 19:19	1
Manganese	**3.7**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:19	1
Nickel	**0.016**	**J**	0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:19	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 19:19	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 19:19	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 19:19	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.017**	**J**	0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:56	1
Barium	**0.27**	**J**	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:56	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:56	1
Chromium	**0.071**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:56	1
Cobalt	**0.024**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:56	1
Copper	**0.083**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:56	1
Iron	**63**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:56	1
Lead	**0.041**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:56	1
Manganese	**0.36**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:56	1
Nickel	**0.084**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:56	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:56	1

Client Sample ID: FA-1(6-12)-082217
Date Collected: 08/22/17 11:22
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-9
Matrix: Solid
Percent Solids: 85.4

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:56	1
Zinc	**0.18**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:56	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	0.20	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Arsenic	**4.2**		0.51	0.17	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Barium	**32**		0.51	0.058	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Beryllium	**0.70**		0.20	0.048	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Cadmium	**0.19**	**B**	0.10	0.018	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Calcium	**95000**	**B**	100	17	mg/Kg	☼	08/28/17 09:27	08/29/17 12:47	10
Chromium	**16**		0.51	0.25	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Cobalt	**11**		0.25	0.067	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Copper	**24**		0.51	0.14	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Iron	**17000**	**B**	10	5.3	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Lead	**13**		0.25	0.12	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Magnesium	**26000**	**B**	5.1	2.5	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Manganese	**320**	**B**	0.51	0.074	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Nickel	**32**		0.51	0.15	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Potassium	**2600**		25	9.0	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Selenium	<0.51		0.51	0.30	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Silver	<0.25		0.25	0.066	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Sodium	**310**		51	7.5	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Thallium	<0.51		0.51	0.25	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Vanadium	**16**		0.25	0.060	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1
Zinc	**57**		1.0	0.45	mg/Kg	☼	08/28/17 09:27	08/28/17 20:59	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 11:13	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**21**		17	5.7	ug/Kg	☼	08/24/17 08:25	08/24/17 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.2**		0.20	0.20	SU			08/23/17 16:41	1

Definitions/Glossary

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	1,3-Dichloropropene, Total
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604
Phone: 708.534.5200 Fax: 708.534.

500-132979 COC

(optional)

Report To
Contact: S. BabuSuKumar
Company: Weston Solutions Inc
Address: 300 Plaza Circle, Ste 202
Address: Mundelein, IL 60060
Phone: 224-864-7200
Fax: 224-864-7236
E-Mail:

(optional)

Bill To
Contact: SAME
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-132979

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler: 2.5

Client: Weston Solutions Inc
Client Project #: 02056-014-061.0030
Project Name: IDOT 061-IL 19 at East Ave
Project Location/State: Streamwood, IL
Lab Project #:
Sampler: M. Doheny-Skubic
Lab PM: D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	pH					Comments
1		CB7-1(0-6)-082217	8/22/17	1000	5	S	X	X	X	X	X					
2		CB7-1(0-6)-082217D		1000												
3		CB7-1(6-10)-082217		1005												
4		BP-2(0-6)-082217		1035												
5		BP-2(6-12)-082217		1040												
6		BP-1(0-6)-082217		1100												
7		BP-1(6-12)-082217		1105												
8		FA-1(0-6)-082217		1118												
9		FA-1(6-12)-082217		1122												
10		CB4-1(0-6)-082217	8/22/17	1140	5	S	X	X	X	X	X					

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/17	1400	[illegible]	TA	8/22/17	1400
[illegible]	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

8/31/2017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact: S. Babusukumar
Company: Weston Solutions Inc.
Address: 300 Plaza Circle, Ste. 202
Address: Mundelein, IL 60060
Phone: 224-864-7200
Fax: 224-864-7236
E-Mail:

(optional)
Bill To
Contact: SAME
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-132979
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler:

Client: Weston Solutions
Client Project #: 02056.014.061.0030
Project Name: IDOT 061-IL 19 at East Ave
Project Location/State: Streamwood, IL
Lab Project #:
Sampler: M. Doherty-Skubic
Lab PM: D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	TPH					Comments
11		CB4-1(6-12)-082217	8/22/17	1145	5	S		X	X	X	X	X					
☆	AD	LAST ITEM															MS
																	MSD
																	MS
																	MS
																	MS
																	MS
																	MS
																	MS

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/2017	1400	[illegible]	TA	8/22/17	1400
P. Neal	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

8/31/2017

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: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave. Office Phone Number, if available: _____

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

1300 Irving Park Road (ISGS Site No. 3118-7)

City: Streamwood State: IL Zip Code: _____

County: Cook Township: _____

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

Latitude: 42.008355265 (Decimal Degrees) Longitude: -88.153770177 (-Decimal Degrees)

Identify how the lat/long data were determined:

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

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

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	Illinois Department of Transportation	Name:	Illinois Department of Transportation
Street Address:	201 West Center Court	Street Address:	201 West Center Court
PO Box:		PO Box:	
City:	Schaumburg State: IL	City:	Schaumburg State: IL
Zip Code:	60196-1096 Phone: 847-705-4101	Zip Code:	60196-1096 Phone: 847-705-4101
Contact:	Sam Mead	Contact:	Sam Mead
Email, if available:	Sam.Mead@illinois.gov	Email, if available:	Sam.Mead@illinois.gov

Project Name: FAU 1321: IL Rte 19 - Irving Park Rd at East Ave.

Latitude: 42.008355265 Longitude: -88.153770177

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)]:

LOCATION CB7-1 WAS SAMPLED ADJACENT TO ISGS SITE No. 3118-7. SEE FIGURE 3-1 AND TABLE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

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

TESTAMERICA ANALYTICAL REPORT - JOB ID: 500-132979-1.
ALSO SEE FIGURE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

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

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

Company Name: Weston Solutions, Inc.

Street Address: 300 Circle Plaza; Suite 202

City: Mundelein State: IL Zip Code: 60060

Phone: (224) 864-7200

Michael Castillo, P.G.
Printed Name:

Michael A Castillo
Licensed Professional Engineer or
Licensed Professional Geologist Signature:

26 September 2017
Date:

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

Summary Table of ISGS Site No. 3118-7
Comparison of Detected Constituents to Applicable Reference Concentrations
Soil Analytical Results
Illinois Department of Transportation
FAU 1321: IL Route 19 - Irving Park Road at East Avenue
Streamwood, Cook County, Illinois

Field Sample ID	CB7-1(0-6)-082217	CB7-1(0-6)-082217D	CB7-1(6-10)-082217	Soil Reference Concentrations[A]
Sample Date	8/22/2017	8/22/2017	8/22/2017	
Location ID	CB7-1	CB7-1	CB7-1	
Depth	0 - 6	0 - 6	6 - 10	
ISGS Site No.	3118-7	3118-7	3118-7	
Parameter				
Laboratory pH (s.u.)	8.9	8.8	8.8	<6.25; >9.0
VOCs	**None Detected**			
SVOCs (ug/kg)				
2-Methylnaphthalene	ND	ND	19 J	---
Benzo(a)anthracene	57	18 J	31 J	900 / 1100 / 1800
Benzo(a)pyrene	94	25 J	48	90 / 1300 / 2100
Benzo(b)fluoranthene	120 J	33 J	55	900 / 1500 / 2100
Benzo(g,h,i)perylene	80 J-	23 J	45	---
Benzo(k)fluoranthene	78 J+	17 J	43	9000
Chrysene	110 J	39 J	62	88000
Dibenzo(a,h)anthracene	16 J	ND	ND	90 / 200 / 420
Fluoranthene	150 J	38 J	80	3100000
Indeno(1,2,3-cd)pyrene	71 J-	16 J	32 J	900 / 900 / 1600
Phenanthrene	43	19 J	82	---
Pyrene	150 J	42 J	82	2300000
Total Metals (mg/kg)				
Arsenic, Total	6.3	8.1	6	11.3 / 13.0
Barium, Total	40 J	41	30	1500
Beryllium, Total	0.64	0.65	0.69	22
Cadmium, Total	ND	0.24 B	ND	5.2
Calcium, Total	100000 J	96000 B	100000 B	---
Chromium, Total	14	14	15	21
Cobalt, Total	9.8 J	17 J	19	20
Copper, Total	22	22	23	2900
Lead, Total	12 J-	13	13	107
Magnesium, Total	24000 J	25000 B	28000 B	325000
Manganese, Total	320 J	420 B	340 B	630 / 636
Mercury, Total	0.022	0.022	0.021	0.89
Nickel, Total	27	33	35	100
Potassium, Total	1800 J+	2000	2700	---
Sodium, Total	140	150	120	---
Vanadium, Total	17 J	17	16	550
Zinc, Total	60	60	57	5100
TCLP Metals (mg/l)				
Barium, TCLP	0.28 J	0.28 J	0.28 J	2
Cadmium, TCLP	0.002 J	ND	ND	0.005
Cobalt, TCLP	ND	ND	0.014 J	1
Manganese, TCLP	0.54	0.48	0.8	0.15
Mercury, TCLP	ND	0.00024	ND	0.002
Nickel, TCLP	ND	ND	0.035	0.1
Zinc, SPLP	0.43 J	0.21 J	ND	5
SPLP Metals (mg/l)				
Arsenic, SPLP	0.071	0.039 J	ND	0.05
Barium, SPLP	0.48 J	0.29 J	ND	2
Beryllium, SPLP	0.0073	0.0045	ND	0.004
Cadmium, SPLP	0.002 J	ND	ND	0.005
Chromium, SPLP	0.17 J	0.1 J	0.01 J	0.1
Cobalt, SPLP	0.04	0.018 J	ND	1
Copper, SPLP	0.19 J	0.097 J	0.01 J	0.65
Lead, SPLP	0.076 J	0.037 J	ND	0.0075
Manganese, SPLP	0.59 J	0.29 J	0.032	0.15
Mercury, SPLP	ND	ND	0.00028	0.002
Nickel, SPLP	0.17 J	0.082 J	ND	0.1
Selenium, TCLP	ND	0.021 J	ND	0.05

Summary Table of ISGS Site No. 3118-7
Comparison of Detected Constituents to Applicable Reference Concentrations
Soil Analytical Results
Illinois Department of Transportation
FAU 1321: IL Route 19 - Irving Park Road at East Avenue
Streamwood, Cook County, Illinois

Notes:

--- - not applicable or value not available.

[A] - Soil reference concentrations from MAC Table. Background values for Chicago corporate limits and MSA counties ar

ND - Constituent not detected above the reporting limit.

B - Constituent detected in the laboratory blank and investigative samples.

J - Estimated concentration.

J+ - Estimated concentration, biased high.

J- - Estimated concentration, biased low.

Shaded values indicate concentration **exceeds** Reference Concentration.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-132979-1
Client Project/Site: IDOT - Streamwood - WO 061

For:
Weston Solutions, Inc.
300 Plaza Circle, Suite 202
Mundelein, Illinois 60060

Attn: Mr. S. Babusukumar

Authorized for release by:
8/31/2017 10:40:36 AM

Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

Client Sample ID: CB7-1(0-6)-082217
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-1
Matrix: Solid
Percent Solids: 86.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<18		18	7.7	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Benzene	<1.8		1.8	0.45	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Bromodichloromethane	<1.8		1.8	0.36	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Bromoform	<1.8		1.8	0.52	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Bromomethane	<4.4		4.4	1.7	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Carbon disulfide	<4.4		4.4	0.92	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Carbon tetrachloride	<1.8		1.8	0.51	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Chlorobenzene	<1.8		1.8	0.65	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Chloroethane	<4.4		4.4	1.3	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Chloroform	<1.8		1.8	0.61	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Chloromethane	<4.4		4.4	1.8	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
cis-1,2-Dichloroethene	<1.8		1.8	0.49	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
cis-1,3-Dichloropropene	<1.8		1.8	0.53	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Dibromochloromethane	<1.8		1.8	0.58	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,1-Dichloroethane	<1.8		1.8	0.61	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,2-Dichloroethane	<4.4		4.4	1.4	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,1-Dichloroethene	<1.8		1.8	0.61	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,2-Dichloropropane	<1.8		1.8	0.46	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,3-Dichloropropene, Total	<1.8		1.8	0.62	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Ethylbenzene	<1.8		1.8	0.85	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
2-Hexanone	<4.4		4.4	1.4	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Methylene Chloride	<4.4		4.4	1.7	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Methyl Ethyl Ketone	<4.4		4.4	2.0	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
methyl isobutyl ketone	<4.4		4.4	1.3	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Methyl tert-butyl ether	<1.8		1.8	0.52	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Styrene	<1.8		1.8	0.53	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,1,2,2-Tetrachloroethane	<1.8		1.8	0.57	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Tetrachloroethene	<1.8		1.8	0.60	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Toluene	<1.8		1.8	0.45	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
trans-1,2-Dichloroethene	<1.8		1.8	0.78	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
trans-1,3-Dichloropropene	<1.8		1.8	0.62	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,1,1-Trichloroethane	<1.8		1.8	0.59	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
1,1,2-Trichloroethane	<1.8		1.8	0.76	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Trichloroethene	<1.8		1.8	0.60	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Vinyl chloride	<1.8		1.8	0.78	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1
Xylenes, Total	<3.5		3.5	0.57	ug/Kg	☼	08/23/17 07:40	08/29/17 12:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 131*	*08/23/17 07:40*	*08/29/17 12:02*	*1*
Dibromofluoromethane	*102*		*75 - 126*	*08/23/17 07:40*	*08/29/17 12:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 134*	*08/23/17 07:40*	*08/29/17 12:02*	*1*
Toluene-d8 (Surr)	*96*		*75 - 124*	*08/23/17 07:40*	*08/29/17 12:02*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<180		180	40	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
1,2-Dichlorobenzene	<180		180	44	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
1,3-Dichlorobenzene	<180		180	41	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
1,4-Dichlorobenzene	<180		180	47	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2,2'-oxybis[1-chloropropane]	<180		180	42	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1

Client Sample ID: CB7-1(0-6)-082217
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-1
Matrix: Solid
Percent Solids: 86.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<360		360	84	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2,4,6-Trichlorophenol	<360		360	130	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2,4-Dichlorophenol	<360		360	87	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2,4-Dimethylphenol	<360		360	140	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2,4-Dinitrophenol	<740	F1	740	650	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2,4-Dinitrotoluene	<180		180	58	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2,6-Dinitrotoluene	<180		180	72	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2-Chloronaphthalene	<180		180	41	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2-Chlorophenol	<180		180	63	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2-Methylnaphthalene	<74		74	6.7	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2-Methylphenol	<180		180	59	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2-Nitroaniline	<180		180	49	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
2-Nitrophenol	<360		360	87	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
3 & 4 Methylphenol	<180		180	61	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
3,3'-Dichlorobenzidine	<180	F1 F2	180	51	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
3-Nitroaniline	<360	F2	360	110	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
4,6-Dinitro-2-methylphenol	<740	F1	740	290	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
4-Bromophenyl phenyl ether	<180		180	48	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
4-Chloro-3-methylphenol	<360		360	120	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
4-Chloroaniline	<740	F2	740	170	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
4-Chlorophenyl phenyl ether	<180		180	43	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
4-Nitroaniline	<360		360	150	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
4-Nitrophenol	<740		740	350	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Acenaphthene	<36		36	6.6	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Acenaphthylene	<36		36	4.8	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Anthracene	<36		36	6.1	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Benzo[a]anthracene	**57**		36	4.9	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Benzo[a]pyrene	**94**		36	7.1	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Benzo[b]fluoranthene	**120**	**F1**	36	7.9	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Benzo[g,h,i]perylene	**80**	**F1**	36	12	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Benzo[k]fluoranthene	**78**	**F1**	36	11	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Bis(2-chloroethoxy)methane	<180		180	37	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Bis(2-chloroethyl)ether	<180	F2	180	55	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Bis(2-ethylhexyl) phthalate	<180		180	67	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Butyl benzyl phthalate	<180	F1 F2	180	70	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Carbazole	<180		180	92	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Chrysene	**110**		36	10	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Dibenz(a,h)anthracene	**16**	**J F1**	36	7.1	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Dibenzofuran	<180		180	43	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Diethyl phthalate	<180		180	62	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Dimethyl phthalate	<180		180	48	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Di-n-butyl phthalate	<180		180	56	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Di-n-octyl phthalate	<180		180	60	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Fluoranthene	**150**		36	6.8	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Fluorene	<36		36	5.2	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Hexachlorobenzene	<74		74	8.5	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Hexachlorobutadiene	<180		180	58	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Hexachlorocyclopentadiene	<740	F1	740	210	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Hexachloroethane	<180	F1	180	56	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1

Client Sample ID: CB7-1(0-6)-082217
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-1
Matrix: Solid
Percent Solids: 86.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**71**	**F1**	36	9.5	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Isophorone	<180		180	41	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Naphthalene	<36		36	5.6	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Nitrobenzene	<36		36	9.2	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
N-Nitrosodi-n-propylamine	<74		74	45	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
N-Nitrosodiphenylamine	<180		180	43	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Pentachlorophenol	<740		740	590	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Phenanthrene	**43**		36	5.1	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Phenol	<180		180	81	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1
Pyrene	**150**		36	7.3	ug/Kg	☼	08/28/17 07:13	08/29/17 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*40*		*25 - 139*	*08/28/17 07:13*	*08/29/17 17:42*	*1*
2-Fluorobiphenyl	*68*		*44 - 121*	*08/28/17 07:13*	*08/29/17 17:42*	*1*
2-Fluorophenol	*78*		*46 - 133*	*08/28/17 07:13*	*08/29/17 17:42*	*1*
Nitrobenzene-d5	*69*		*41 - 120*	*08/28/17 07:13*	*08/29/17 17:42*	*1*
Phenol-d5	*79*		*46 - 125*	*08/28/17 07:13*	*08/29/17 17:42*	*1*
Terphenyl-d14	*79*		*35 - 160*	*08/28/17 07:13*	*08/29/17 17:42*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:01	1
Barium	**0.28**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:01	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:01	1
Cadmium	**0.0020**	**J**	0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:01	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:01	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:01	1
Copper	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:01	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:01	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:01	1
Manganese	**0.54**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:01	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:01	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:01	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:01	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:01	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.071**		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:18	1
Barium	**0.48**	**J**	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:18	1
Beryllium	**0.0073**		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:18	1
Cadmium	**0.0020**	**J**	0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:18	1
Chromium	**0.17**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:18	1
Cobalt	**0.040**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:18	1
Copper	**0.19**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:18	1
Iron	**170**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:18	1
Lead	**0.076**		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:18	1
Manganese	**0.59**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:18	1
Nickel	**0.17**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:18	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:18	1

Client Sample ID: CB7-1(0-6)-082217
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-1
Matrix: Solid
Percent Solids: 86.8

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:18	1
Zinc	**0.43**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:18	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0	F1	1.0	0.20	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Arsenic	**6.3**		0.52	0.18	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Barium	**40**	**F1**	0.52	0.059	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Beryllium	**0.64**		0.21	0.049	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Cadmium	**0.22**	**B**	0.10	0.019	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Calcium	**100000**	**B**	100	18	mg/Kg	☼	08/28/17 09:27	08/29/17 12:06	10
Chromium	**14**		0.52	0.26	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Cobalt	**9.8**		0.26	0.068	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Copper	**22**		0.52	0.15	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Iron	**18000**	**B**	10	5.4	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Lead	**12**	**F1**	0.26	0.12	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Magnesium	**24000**	**B**	5.2	2.6	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Manganese	**320**	**B**	0.52	0.076	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Nickel	**27**		0.52	0.15	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Potassium	**1800**	**F1**	26	9.2	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Selenium	<0.52	F1	0.52	0.31	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Silver	<0.26		0.26	0.067	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Sodium	**140**		52	7.7	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Thallium	<0.52	F1	0.52	0.26	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Vanadium	**17**		0.26	0.062	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1
Zinc	**60**		1.0	0.46	mg/Kg	☼	08/28/17 09:27	08/28/17 20:04	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 12:11	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:19	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**22**		19	6.3	ug/Kg	☼	08/24/17 08:25	08/24/17 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.9**		0.20	0.20	SU			08/23/17 16:41	1

Client Sample ID: CB7-1(0-6)-082217D
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-2
Matrix: Solid
Percent Solids: 87.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<20		20	8.6	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Benzene	<2.0		2.0	0.50	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Bromodichloromethane	<2.0		2.0	0.40	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Bromoform	<2.0		2.0	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Bromomethane	<4.9		4.9	1.9	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Carbon disulfide	<4.9		4.9	1.0	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Carbon tetrachloride	<2.0		2.0	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Chlorobenzene	<2.0		2.0	0.73	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Chloroethane	<4.9		4.9	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Chloroform	<2.0		2.0	0.69	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Chloromethane	<4.9		4.9	2.0	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
cis-1,2-Dichloroethene	<2.0		2.0	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
cis-1,3-Dichloropropene	<2.0		2.0	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Dibromochloromethane	<2.0		2.0	0.65	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,1-Dichloroethane	<2.0		2.0	0.68	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,2-Dichloroethane	<4.9		4.9	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,1-Dichloroethene	<2.0		2.0	0.68	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,2-Dichloropropane	<2.0		2.0	0.51	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,3-Dichloropropene, Total	<2.0		2.0	0.69	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Ethylbenzene	<2.0		2.0	0.95	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
2-Hexanone	<4.9		4.9	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Methylene Chloride	<4.9		4.9	1.9	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Methyl Ethyl Ketone	<4.9		4.9	2.2	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
methyl isobutyl ketone	<4.9		4.9	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Methyl tert-butyl ether	<2.0		2.0	0.58	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Styrene	<2.0		2.0	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,1,2,2-Tetrachloroethane	<2.0		2.0	0.63	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Tetrachloroethene	<2.0		2.0	0.67	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Toluene	<2.0		2.0	0.50	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
trans-1,2-Dichloroethene	<2.0		2.0	0.88	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
trans-1,3-Dichloropropene	<2.0		2.0	0.69	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,1,1-Trichloroethane	<2.0		2.0	0.66	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
1,1,2-Trichloroethane	<2.0		2.0	0.85	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Trichloroethene	<2.0		2.0	0.67	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Vinyl chloride	<2.0		2.0	0.88	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1
Xylenes, Total	<4.0		4.0	0.63	ug/Kg	☼	08/23/17 07:40	08/24/17 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 131*	*08/23/17 07:40*	*08/24/17 20:38*	*1*
Dibromofluoromethane	*103*		*75 - 126*	*08/23/17 07:40*	*08/24/17 20:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 134*	*08/23/17 07:40*	*08/24/17 20:38*	*1*
Toluene-d8 (Surr)	*97*		*75 - 124*	*08/23/17 07:40*	*08/24/17 20:38*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<180		180	38	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
1,2-Dichlorobenzene	<180		180	43	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
1,3-Dichlorobenzene	<180		180	40	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
1,4-Dichlorobenzene	<180		180	46	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2,2'-oxybis[1-chloropropane]	<180		180	41	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1

Client Sample ID: CB7-1(0-6)-082217D
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-2
Matrix: Solid
Percent Solids: 87.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<350		350	81	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2,4,6-Trichlorophenol	<350		350	120	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2,4-Dichlorophenol	<350		350	85	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2,4-Dimethylphenol	<350		350	140	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2,4-Dinitrophenol	<720		720	630	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2,4-Dinitrotoluene	<180		180	57	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2,6-Dinitrotoluene	<180		180	70	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2-Chloronaphthalene	<180		180	39	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2-Chlorophenol	<180		180	61	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2-Methylnaphthalene	<72		72	6.6	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2-Methylphenol	<180		180	57	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2-Nitroaniline	<180		180	48	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
2-Nitrophenol	<350		350	84	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
3 & 4 Methylphenol	<180		180	59	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
3,3'-Dichlorobenzidine	<180		180	50	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
3-Nitroaniline	<350		350	110	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
4,6-Dinitro-2-methylphenol	<720		720	290	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
4-Bromophenyl phenyl ether	<180		180	47	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
4-Chloro-3-methylphenol	<350		350	120	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
4-Chloroaniline	<720		720	170	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
4-Chlorophenyl phenyl ether	<180		180	42	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
4-Nitroaniline	<350		350	150	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
4-Nitrophenol	<720		720	340	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Acenaphthene	<35		35	6.4	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Acenaphthylene	<35		35	4.7	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Anthracene	<35		35	6.0	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Benzo[a]anthracene	**18**	**J**	35	4.8	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Benzo[a]pyrene	**25**	**J**	35	6.9	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Benzo[b]fluoranthene	**33**	**J**	35	7.7	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Benzo[g,h,i]perylene	**23**	**J**	35	11	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Benzo[k]fluoranthene	**17**	**J**	35	11	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Bis(2-chloroethoxy)methane	<180		180	36	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Bis(2-chloroethyl)ether	<180		180	53	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Bis(2-ethylhexyl) phthalate	<180		180	65	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Butyl benzyl phthalate	<180		180	68	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Carbazole	<180		180	89	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Chrysene	**39**		35	9.7	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Dibenz(a,h)anthracene	<35		35	6.9	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Dibenzofuran	<180		180	42	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Diethyl phthalate	<180		180	60	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Dimethyl phthalate	<180		180	47	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Di-n-butyl phthalate	<180		180	54	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Di-n-octyl phthalate	<180		180	58	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Fluoranthene	**38**		35	6.6	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Fluorene	<35		35	5.0	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Hexachlorobenzene	<72		72	8.3	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Hexachlorobutadiene	<180		180	56	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Hexachlorocyclopentadiene	<720		720	210	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Hexachloroethane	<180		180	54	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1

Client Sample ID: CB7-1(0-6)-082217D
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-2
Matrix: Solid
Percent Solids: 87.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	16	J	35	9.2	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Isophorone	<180		180	40	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Naphthalene	<35		35	5.5	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Nitrobenzene	<35		35	8.9	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
N-Nitrosodi-n-propylamine	<72		72	44	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
N-Nitrosodiphenylamine	<180		180	42	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Pentachlorophenol	<720		720	570	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Phenanthrene	19	J	35	5.0	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Phenol	<180		180	79	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1
Pyrene	42		35	7.1	ug/Kg	☼	08/28/17 07:13	08/29/17 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*37*		*25 - 139*	*08/28/17 07:13*	*08/29/17 18:09*	*1*
2-Fluorobiphenyl	*78*		*44 - 121*	*08/28/17 07:13*	*08/29/17 18:09*	*1*
2-Fluorophenol	*89*		*46 - 133*	*08/28/17 07:13*	*08/29/17 18:09*	*1*
Nitrobenzene-d5	*79*		*41 - 120*	*08/28/17 07:13*	*08/29/17 18:09*	*1*
Phenol-d5	*85*		*46 - 125*	*08/28/17 07:13*	*08/29/17 18:09*	*1*
Terphenyl-d14	*87*		*35 - 160*	*08/28/17 07:13*	*08/29/17 18:09*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:12	1
Barium	0.28	J	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:12	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:12	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:12	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:12	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:12	1
Copper	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:12	1
Iron	0.26	J	0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:12	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:12	1
Manganese	0.48		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:12	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:12	1
Selenium	0.021	J	0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:12	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:12	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:12	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.039	J	0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:23	1
Barium	0.29	J	0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:23	1
Beryllium	0.0045		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:23	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:23	1
Chromium	0.10		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:23	1
Cobalt	0.018	J	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:23	1
Copper	0.097		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:23	1
Iron	91		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:23	1
Lead	0.037		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:23	1
Manganese	0.29		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:23	1
Nickel	0.082		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:23	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:23	1

Client Sample ID: CB7-1(0-6)-082217D
Date Collected: 08/22/17 10:00
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-2
Matrix: Solid
Percent Solids: 87.9

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:23	1
Zinc	**0.21**	**J**	0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:23	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.21	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Arsenic	**8.1**		0.53	0.18	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Barium	**41**		0.53	0.060	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Beryllium	**0.65**		0.21	0.049	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Cadmium	**0.24**	**B**	0.11	0.019	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Calcium	**96000**	**B**	110	18	mg/Kg	☼	08/28/17 09:27	08/29/17 12:25	10
Chromium	**14**		0.53	0.26	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Cobalt	**17**		0.26	0.069	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Copper	**22**		0.53	0.15	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Iron	**19000**	**B**	11	5.5	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Lead	**13**		0.26	0.12	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Magnesium	**25000**	**B**	5.3	2.6	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Manganese	**420**	**B**	0.53	0.077	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Nickel	**33**		0.53	0.15	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Potassium	**2000**		26	9.4	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Selenium	<0.53		0.53	0.31	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Silver	<0.26		0.26	0.068	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Sodium	**150**		53	7.8	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Vanadium	**17**		0.26	0.062	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1
Zinc	**60**		1.1	0.46	mg/Kg	☼	08/28/17 09:27	08/28/17 20:23	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.24**		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 10:43	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**22**		18	6.1	ug/Kg	☼	08/24/17 08:25	08/24/17 12:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.8**		0.20	0.20	SU			08/23/17 16:41	1

Client Sample ID: CB7-1(6-10)-082217
Date Collected: 08/22/17 10:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-3
Matrix: Solid
Percent Solids: 83.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<16		16	7.1	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Benzene	<1.6		1.6	0.41	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Bromodichloromethane	<1.6		1.6	0.33	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Bromoform	<1.6		1.6	0.48	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Bromomethane	<4.1		4.1	1.5	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Carbon disulfide	<4.1		4.1	0.85	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Carbon tetrachloride	<1.6		1.6	0.47	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Chlorobenzene	<1.6		1.6	0.60	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Chloroethane	<4.1		4.1	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Chloroform	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Chloromethane	<4.1		4.1	1.6	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
cis-1,2-Dichloroethene	<1.6		1.6	0.45	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
cis-1,3-Dichloropropene	<1.6		1.6	0.49	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Dibromochloromethane	<1.6		1.6	0.53	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,1-Dichloroethane	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,2-Dichloroethane	<4.1		4.1	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,1-Dichloroethene	<1.6		1.6	0.56	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,2-Dichloropropane	<1.6		1.6	0.42	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,3-Dichloropropene, Total	<1.6		1.6	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Ethylbenzene	<1.6		1.6	0.78	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
2-Hexanone	<4.1		4.1	1.3	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Methylene Chloride	<4.1		4.1	1.6	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Methyl Ethyl Ketone	<4.1		4.1	1.8	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
methyl isobutyl ketone	<4.1		4.1	1.2	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Methyl tert-butyl ether	<1.6		1.6	0.48	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Styrene	<1.6		1.6	0.49	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,1,2,2-Tetrachloroethane	<1.6		1.6	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Tetrachloroethene	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Toluene	<1.6		1.6	0.41	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
trans-1,2-Dichloroethene	<1.6		1.6	0.72	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
trans-1,3-Dichloropropene	<1.6		1.6	0.57	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,1,1-Trichloroethane	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
1,1,2-Trichloroethane	<1.6		1.6	0.70	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Trichloroethene	<1.6		1.6	0.55	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Vinyl chloride	<1.6		1.6	0.72	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1
Xylenes, Total	<3.3		3.3	0.52	ug/Kg	☼	08/23/17 07:40	08/24/17 21:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*75 - 131*	*08/23/17 07:40*	*08/24/17 21:03*	*1*
Dibromofluoromethane	*102*		*75 - 126*	*08/23/17 07:40*	*08/24/17 21:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 134*	*08/23/17 07:40*	*08/24/17 21:03*	*1*
Toluene-d8 (Surr)	*100*		*75 - 124*	*08/23/17 07:40*	*08/24/17 21:03*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<190		190	40	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
1,2-Dichlorobenzene	<190		190	45	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
1,3-Dichlorobenzene	<190		190	42	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
1,4-Dichlorobenzene	<190		190	48	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2,2'-oxybis[1-chloropropane]	<190		190	43	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1

Client Sample ID: CB7-1(6-10)-082217
Date Collected: 08/22/17 10:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-3
Matrix: Solid
Percent Solids: 83.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<370		370	85	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2,4,6-Trichlorophenol	<370		370	130	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2,4-Dichlorophenol	<370		370	89	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2,4-Dimethylphenol	<370		370	140	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2,4-Dinitrophenol	<750		750	660	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2,4-Dinitrotoluene	<190		190	59	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2,6-Dinitrotoluene	<190		190	74	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2-Chloronaphthalene	<190		190	41	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2-Chlorophenol	<190		190	64	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2-Methylnaphthalene	**19**	**J**	75	6.9	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2-Methylphenol	<190		190	60	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2-Nitroaniline	<190		190	50	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
2-Nitrophenol	<370		370	88	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
3 & 4 Methylphenol	<190		190	62	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
3,3'-Dichlorobenzidine	<190		190	52	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
3-Nitroaniline	<370		370	120	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
4,6-Dinitro-2-methylphenol	<750		750	300	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
4-Bromophenyl phenyl ether	<190		190	49	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
4-Chloro-3-methylphenol	<370		370	130	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
4-Chloroaniline	<750		750	180	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
4-Chlorophenyl phenyl ether	<190		190	44	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
4-Nitroaniline	<370		370	160	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
4-Nitrophenol	<750		750	360	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Acenaphthene	<37		37	6.7	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Acenaphthylene	<37		37	4.9	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Anthracene	<37		37	6.3	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Benzo[a]anthracene	**31**	**J**	37	5.0	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Benzo[a]pyrene	**48**		37	7.2	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Benzo[b]fluoranthene	**55**		37	8.1	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Benzo[g,h,i]perylene	**45**		37	12	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Benzo[k]fluoranthene	**43**		37	11	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Bis(2-chloroethoxy)methane	<190		190	38	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Bis(2-chloroethyl)ether	<190		190	56	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Bis(2-ethylhexyl) phthalate	<190		190	68	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Butyl benzyl phthalate	<190		190	71	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Carbazole	<190		190	94	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Chrysene	**62**		37	10	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Dibenz(a,h)anthracene	<37		37	7.2	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Dibenzofuran	<190		190	44	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Diethyl phthalate	<190		190	63	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Dimethyl phthalate	<190		190	49	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Di-n-butyl phthalate	<190		190	57	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Di-n-octyl phthalate	<190		190	61	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Fluoranthene	**80**		37	6.9	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Fluorene	<37		37	5.3	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Hexachlorobenzene	<75		75	8.7	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Hexachlorobutadiene	<190		190	59	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Hexachlorocyclopentadiene	<750		750	220	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Hexachloroethane	<190		190	57	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1

Client Sample ID: CB7-1(6-10)-082217
Date Collected: 08/22/17 10:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-3
Matrix: Solid
Percent Solids: 83.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**32**	**J**	37	9.7	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Isophorone	<190		190	42	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Naphthalene	<37		37	5.8	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Nitrobenzene	<37		37	9.3	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
N-Nitrosodi-n-propylamine	<75		75	46	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
N-Nitrosodiphenylamine	<190		190	44	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Pentachlorophenol	<750		750	600	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Phenanthrene	**82**		37	5.2	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Phenol	<190		190	83	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1
Pyrene	**82**		37	7.4	ug/Kg	☼	08/28/17 07:13	08/29/17 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*48*		*25 - 139*	*08/28/17 07:13*	*08/29/17 18:36*	*1*
2-Fluorobiphenyl	*85*		*44 - 121*	*08/28/17 07:13*	*08/29/17 18:36*	*1*
2-Fluorophenol	*95*		*46 - 133*	*08/28/17 07:13*	*08/29/17 18:36*	*1*
Nitrobenzene-d5	*86*		*41 - 120*	*08/28/17 07:13*	*08/29/17 18:36*	*1*
Phenol-d5	*95*		*46 - 125*	*08/28/17 07:13*	*08/29/17 18:36*	*1*
Terphenyl-d14	*94*		*35 - 160*	*08/28/17 07:13*	*08/29/17 18:36*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:16	1
Barium	**0.28**	**J**	0.50	0.050	mg/L		08/28/17 08:26	08/28/17 18:16	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:26	08/28/17 18:16	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:26	08/28/17 18:16	1
Chromium	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:16	1
Cobalt	**0.014**	**J**	0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:16	1
Copper	**0.012**	**J B**	0.050	0.010	mg/L		08/28/17 08:26	08/28/17 18:16	1
Iron	<0.40		0.40	0.20	mg/L		08/28/17 08:26	08/28/17 18:16	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:26	08/28/17 18:16	1
Manganese	**0.80**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:16	1
Nickel	**0.035**		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:16	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:26	08/28/17 18:16	1
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:26	08/28/17 18:16	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:26	08/28/17 18:16	1

Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		08/28/17 08:30	08/29/17 00:26	1
Barium	<0.50		0.50	0.050	mg/L		08/28/17 08:30	08/29/17 00:26	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		08/28/17 08:30	08/29/17 00:26	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		08/28/17 08:30	08/29/17 00:26	1
Chromium	**0.010**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:26	1
Cobalt	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:26	1
Copper	**0.010**	**J**	0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:26	1
Iron	**5.6**		0.40	0.20	mg/L		08/28/17 08:30	08/29/17 00:26	1
Lead	<0.0075		0.0075	0.0075	mg/L		08/28/17 08:30	08/29/17 00:26	1
Manganese	**0.032**		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:26	1
Nickel	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:26	1
Selenium	<0.050		0.050	0.020	mg/L		08/28/17 08:30	08/29/17 00:26	1

Client Sample ID: CB7-1(6-10)-082217
Date Collected: 08/22/17 10:05
Date Received: 08/22/17 17:15

Lab Sample ID: 500-132979-3
Matrix: Solid
Percent Solids: 83.7

Method: 6010B - Metals (ICP) - SPLP East (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.025		0.025	0.010	mg/L		08/28/17 08:30	08/29/17 00:26	1
Zinc	<0.50		0.50	0.020	mg/L		08/28/17 08:30	08/29/17 00:26	1

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	0.20	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Arsenic	**6.0**		0.52	0.18	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Barium	**30**		0.52	0.059	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Beryllium	**0.69**		0.21	0.049	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Cadmium	**0.21**	**B**	0.10	0.019	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Calcium	**100000**	**B**	100	18	mg/Kg	☼	08/28/17 09:27	08/29/17 12:29	10
Chromium	**15**		0.52	0.26	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Cobalt	**19**		0.26	0.068	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Copper	**23**		0.52	0.15	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Iron	**18000**	**B**	10	5.4	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Lead	**13**		0.26	0.12	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Magnesium	**28000**	**B**	5.2	2.6	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Manganese	**340**	**B**	0.52	0.075	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Nickel	**35**		0.52	0.15	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Potassium	**2700**		26	9.2	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Selenium	<0.52		0.52	0.31	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Silver	<0.26		0.26	0.067	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Sodium	**120**		52	7.7	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Vanadium	**16**		0.26	0.061	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1
Zinc	**57**		1.0	0.46	mg/Kg	☼	08/28/17 09:27	08/28/17 20:35	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 10:44	1

Method: 7470A - Mercury (CVAA) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.28**		0.20	0.20	ug/L		08/25/17 13:15	08/28/17 09:31	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**21**		19	6.2	ug/Kg	☼	08/24/17 08:25	08/24/17 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.8**		0.20	0.20	SU			08/23/17 16:41	1

Definitions/Glossary

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Weston Solutions, Inc.
Project/Site: IDOT - Streamwood - WO 061

TestAmerica Job ID: 500-132979-1

Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	1,3-Dichloropropene, Total
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604
Phone: 708.534.5200 Fax: 708.534.

500-132979 COC

(optional)

Report To
Contact: S. BabuSuKumar
Company: Weston Solutions Inc
Address: 300 Plaza Circle, Ste 202
Address: Mundelein, IL 60060
Phone: 224-864-7200
Fax: 224-864-7236
E-Mail:

(optional)

Bill To
Contact: SAME
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-132979

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler: 2.5

Client: Weston Solutions Inc
Client Project #: 02056-014-061.0030
Project Name: IDOT 061-IL 19 at East Ave
Project Location/State: Streamwood, IL
Lab Project #:
Sampler: M. Doheny-Skubic
Lab PM: D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	pH					Comments
1		CB7-1(0-6)-082217	8/22/17	1000	5	S	X	X	X	X	X					
2		CB7-1(0-6)-082217D		1000												
3		CB7-1(6-10)-082217		1005												
4		BP-2(0-6)-082217		1035												
5		BP-2(6-12)-082217		1040												
6		BP-1(0-6)-082217		1100												
7		BP-1(6-12)-082217		1105												
8		FA-1(0-6)-082217		1118												
9		FA-1(6-12)-082217		1122												
10		CB4-1(0-6)-082217	8/22/17	1140	5	S	X	X	X	X	X					

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/17	1400	[illegible]	TA	8/23/17	1400
[illegible]	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

8/31/2017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact: S. Babusukumar
Company: Weston Solutions Inc.
Address: 300 Plaza Circle, Ste. 202
Address: Mundelein, IL 60060
Phone: 224-864-7200
Fax: 224-864-7236
E-Mail:

(optional)
Bill To
Contact: SAME
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-132979
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler:

Client: Weston Solutions
Client Project #: 02056.014.061.0030
Project Name: IDOT 061-IL 19 at East Ave
Project Location/State: Streamwood, IL
Lab Project #:
Sampler: M. Doherty-Skubic
Lab PM: D. Wright

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOCs	SVOCs	Total Metals	TCLP/SPLP Metals	TPH					Comments
11		CB4-1(6-12)-082217	8/22/17	1145	5	S		X	X	X	X	X					
★	AD	LAST ITEM AA															MS
																	MSD
																	MS
																	MS
																	MS
																	MS
																	MS
																	MS

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days X 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	Weston	8/22/2017	1400	[illegible]	TA	8/22/17	1400
P. Neal	TA	8/22/17	1715	[illegible]	TA-CHI	8/23/17	0710

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key

WW – Wastewater	SE – Sediment
W – Water	SO – Soil
S – Soil	L – Leachate
SL – Sludge	WI – Wipe
MS – Miscellaneous	DW – Drinking Water
OL – Oil	O – Other
A – Air	

Client Comments

Lab Comments:

TAL-4124-500 (1209)

8/31/2017

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	ASTM D 1621		
at 10% deformation		50 - 70	70 - 90
at 5% deformation		45 - 60	60 - 80
at 2% deformation		15 - 20	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./ºF	2.80E-06 in./in./ºF
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

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: April 2, 2018

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 11.00% 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 reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the

Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the 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) FINAL PAYMENT. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than 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

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

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

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

"**109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.** The Contractor shall report all payments made to the following parties:

(a) first tier subcontractors;

(b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;

(c) material suppliers or trucking firms that are part of the Contractor's submitted DBE utilization plan.

The report shall be made through the Department's on-line subcontractor payment reporting system within 21 days of making the payment."

80397

SUBCONTRACTOR 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

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.