

84

Letting November 8, 2019

Notice to Bidders, Specifications and Proposal



**Contract No. 61F17
COOK County
Section 08-00178-03-BT (Blue Island)
Route CAL-SAG TRAIL
Project 9JTD-912 ()
District 1 Construction Funds**

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)



- 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. November 8, 2019 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. 61F17
COOK County
Section 08-00178-03-BT (Blue Island)
Project 9JTD-912 ()
Route CAL-SAG TRAIL
District 1 Construction Funds**

Construction of a 10 foot wide asphalt trail, concrete sidewalks, pipe culverts, pavement markings and landscaping. Project begins on 131st Street just west of Francisco Avenue easterly on 131st Street to Francisco Avenue, then north along Francisco Avenue continuing east on Vermont Street to Chatham Street and south to Canal Street. At Canal Street the project heads east along the south side of the Cal-Sag Channel terminating at Ashland Avenue, located in the City of Blue Island. //i ;

- 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

Omer Osman,
Acting Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2019

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 1-1-19)

SUPPLEMENTAL SPECIFICATIONS

| <u>Std. Spec. Sec.</u> | <u>Page No.</u> |
|---|-----------------|
| 106 Control of Materials | 1 |
| 107 Legal Regulations and Responsibility to Public | 2 |
| 403 Bituminous Surface Treatment (Class A-1, A-2, A-3) | 3 |
| 404 Micro-Surfacing and Slurry Sealing | 4 |
| 405 Cape Seal | 15 |
| 406 Hot-Mix Asphalt Binder and Surface Course | 25 |
| 420 Portland Cement Concrete Pavement | 26 |
| 424 Portland Cement Concrete Sidewalk | 28 |
| 442 Pavement Patching | 29 |
| 502 Excavation for Structures | 30 |
| 503 Concrete Structures | 32 |
| 504 Precast Concrete Structures | 35 |
| 542 Pipe Culverts | 36 |
| 586 Sand Backfill for Vaulted Abutments | 37 |
| 602 Catch Basin, Manhole, Inlet, Drainage Structure, and Valve Vault Construction, Adjustment, and Reconstruction | 39 |
| 630 Steel Plate Beam Guardrail | 40 |
| 631 Traffic Barrier Terminals | 43 |
| 670 Engineer's Field Office and Laboratory | 44 |
| 701 Work Zone Traffic Control and Protection | 45 |
| 704 Temporary Concrete Barrier | 46 |
| 780 Pavement Striping | 48 |
| 781 Raised Reflective Pavement Markers | 49 |
| 888 Pedestrian Push-Button..... | 50 |
| 1001 Cement | 51 |
| 1003 Fine Aggregates | 52 |
| 1004 Coarse Aggregates | 53 |
| 1006 Metals | 56 |
| 1020 Portland Cement Concrete | 58 |
| 1043 Adjusting Rings | 60 |
| 1050 Poured Joint Sealers | 62 |
| 1069 Pole and Tower | 64 |
| 1077 Post and Foundation | 65 |
| 1096 Pavement Markers | 66 |
| 1101 General Equipment | 67 |
| 1102 Hot-Mix Asphalt Equipment | 68 |
| 1103 Portland Cement Concrete Equipment | 70 |
| 1105 Pavement Marking Equipment | 72 |
| 1106 Work Zone Traffic Control Devices | 74 |

RECURRING SPECIAL PROVISIONS

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

| <u>CHECK SHEET #</u> | | | <u>PAGE NO.</u> |
|----------------------|---|--|-----------------|
| 1 | X | Additional State Requirements for Federal-Aid Construction Contracts | 75 |
| 2 | X | Subletting of Contracts (Federal-Aid Contracts) | 78 |
| 3 | X | EEO | 79 |
| 4 | | Specific EEO Responsibilities Non Federal-Aid Contracts | 89 |
| 5 | | Required Provisions - State Contracts | 94 |
| 6 | | Asbestos Bearing Pad Removal | 100 |
| 7 | | Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal | 101 |
| 8 | | Temporary Stream Crossings and In-Stream Work Pads | 102 |
| 9 | | Construction Layout Stakes Except for Bridges | 103 |
| 10 | X | Construction Layout Stakes | 106 |
| 11 | | Use of Geotextile Fabric for Railroad Crossing | 109 |
| 12 | | Subsealing of Concrete Pavements | 111 |
| 13 | | Hot-Mix Asphalt Surface Correction | 115 |
| 14 | | Pavement and Shoulder Resurfacing | 117 |
| 15 | | Patching with Hot-Mix Asphalt Overlay Removal | 118 |
| 16 | | Polymer Concrete | 120 |
| 17 | | PVC Pipeliner | 122 |
| 18 | | Bicycle Racks | 123 |
| 19 | | Temporary Portable Bridge Traffic Signals | 125 |
| 20 | | Work Zone Public Information Signs | 127 |
| 21 | | Nighttime Inspection of Roadway Lighting | 128 |
| 22 | | English Substitution of Metric Bolts | 129 |
| 23 | | Calcium Chloride Accelerator for Portland Cement Concrete | 130 |
| 24 | | Quality Control of Concrete Mixtures at the Plant | 131 |
| 25 | X | Quality Control/Quality Assurance of Concrete Mixtures | 139 |
| 26 | | Digital Terrain Modeling for Earthwork Calculations | 155 |
| 27 | | Reserved | 157 |
| 28 | | Preventive Maintenance – Bituminous Surface Treatment (A-1) | 158 |
| 29 | | Reserved | 164 |
| 30 | | Reserved | 165 |
| 31 | | Reserved | 166 |
| 32 | | Temporary Raised Pavement Markers | 167 |
| 33 | | Restoring Bridge Approach Pavements Using High-Density Foam | 168 |
| 34 | | Portland Cement Concrete Inlay or Overlay | 171 |
| 35 | | Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching | 175 |

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:

| <u>CHECK SHEET #</u> | <u>PAGE NO.</u> |
|----------------------|--|
| LRS1 | Reserved 179 |
| LRS2 | X Furnished Excavation 180 |
| LRS3 | X Work Zone Traffic Control Surveillance 181 |
| LRS4 | Flaggers in Work Zones 182 |
| LRS5 | Contract Claims 183 |
| LRS6 | Bidding Requirements and Conditions for Contract Proposals 184 |
| LRS7 | Bidding Requirements and Conditions for Material Proposals 190 |
| LRS8 | Reserved 196 |
| LRS9 | Bituminous Surface Treatments 197 |
| LRS10 | Reserved 198 |
| LRS11 | Employment Practices 199 |
| LRS12 | Wages of Employees on Public Works 201 |
| LRS13 | Selection of Labor 203 |
| LRS14 | Paving Brick and Concrete Paver Pavements and Sidewalks 204 |
| LRS15 | Partial Payments 207 |
| LRS16 | Protests on Local Lettings 208 |
| LRS17 | Substance Abuse Prevention Program 209 |
| LRS18 | Multigrade Cold Mix Asphalt 210 |

TABLE OF CONTENTS

| | |
|--|----|
| LOCATION OF PROJECT | 1 |
| DESCRIPTION OF PROJECT | 1 |
| AVAILABLE REPORTS..... | 2 |
| MAINTENANCE OF ROADWAYS | 2 |
| TRAFFIC CONTROL PLAN | 3 |
| STATUS OF UTILITIES (D-1) | 4 |
| REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES..... | 6 |
| PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION.. | 18 |
| DISPOSAL OF SURPLUS MATERIAL..... | 19 |
| REMOVAL OF MISCELLANEOUS ITEMS..... | 19 |
| REMOVAL OF EXISTING PAVEMENT AND APPURTENANCES..... | 19 |
| PIPE CULVERTS..... | 20 |
| PROTECTION OF EXISTING TREES | 20 |
| FAILURE TO COMPLETE PLANT CARE AND ESTABLISHMENT WORK ON TIME .. | 23 |
| SEEDING, CLASS 4A (MODIFIED) | 24 |
| SEEDING, CLASS 5 (MODIFIED)..... | 24 |
| EROSION CONTROL BLANKET | 27 |
| PLANTING WOODY PLANTS | 28 |
| REQUIRED INSPECTION OF WOODY PLANT MATERIAL | 34 |
| SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE) | 34 |
| DROP GATE..... | 40 |
| FENCE REMOVAL..... | 41 |
| MONUMENT TYPE A FOUNDATION | 42 |
| DECORATIVE GATEWAY ELEMENT | 42 |
| DECORATIVE SIGN AND POST (DIRECT POST)..... | 42 |
| COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT | |
| | 43 |
| PORTLAND CEMENT CONCRETE SIDEWALK CURB..... | 43 |
| EMBANKMENT I | 43 |
| EMBANKMENT II | 45 |
| AGGREGATE SUBGRADE IMPROVEMENT (D-1)..... | 46 |
| COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1) | 48 |
| HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D-1) | 48 |
| RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1) | 57 |
| FRICTION AGGREGATE (D-1) | 67 |
| GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1) | 70 |
| TEMPORARY INFORMATION SIGNING..... | 71 |
| PUBLIC CONVIENENCE AND SAFETY (DIST 1) | 72 |
| LR 107-4 INSURANCE | 74 |
| SWPPP & NOI..... | 75 |
| IEPA LPC-662..... | 85 |
| IEPA LPC-663..... | 99 |

BDE SPECIAL PROVISIONS

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

| <u>File Name</u> | <u>Pg.</u> | <u>Special Provision Title</u> | <u>Effective</u> | <u>Revised</u> |
|------------------|------------|--|------------------|----------------|
| 80099 | | Accessible Pedestrian Signals (APS) | April 1, 2003 | Jan. 1, 2014 |
| 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 | |
| 50261 | | Building Removal-Case I (Non-Friable and Friable Asbestos) | Sept. 1, 1990 | April 1, 2010 |
| 50481 | | Building Removal-Case II (Non-Friable Asbestos) | Sept. 1, 1990 | April 1, 2010 |
| 50491 | | Building Removal-Case III (Friable Asbestos) | Sept. 1, 1990 | April 1, 2010 |
| 50531 | | Building Removal-Case IV (No Asbestos) | Sept. 1, 1990 | April 1, 2010 |
| 80404 | | Coarse Aggregate Quality for Micro-Surfacing and Cape Seals | Jan. 1, 2019 | |
| 80384 | 168 | X Compensable Delay Costs | June 2, 2017 | April 1, 2019 |
| 80198 | | Completion Date (via calendar days) | April 1, 2008 | |
| 80199 | | Completion Date (via calendar days) Plus Working Days | April 1, 2008 | |
| 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 | 172 | X Construction Air Quality – Diesel Retrofit | June 1, 2010 | Nov. 1, 2014 |
| 80387 | | Contrast Preformed Plastic Pavement Marking | Nov. 1, 2017 | |
| 80029 | 175 | X Disadvantaged Business Enterprise Participation | Sept. 1, 2000 | Mar. 2, 2019 |
| 80402 | 185 | X Disposal Fees | Nov. 1, 2018 | |
| 80378 | | Dowel Bar Inserter | Jan. 1, 2017 | Jan. 1, 2018 |
| 80405 | | Elastomeric Bearings | Jan. 1, 2019 | |
| 80415 | 187 | X Emulsified Asphalts | Aug. 1, 2019 | |
| 80388 | 190 | X Equipment Parking and Storage | Nov. 1, 2017 | |
| 80229 | | Fuel Cost Adjustment | April 1, 2009 | Aug. 1, 2017 |
| * 80417 | | Geotechnical Fabric for Pipe Underdrains and French Drains | Nov. 1, 2019 | |
| * 80420 | | Geotextile Retaining Walls | Nov. 1, 2019 | |
| 80304 | | Grooving for Recessed Pavement Markings | Nov. 1, 2012 | Nov. 1, 2017 |
| * 80416 | | Hot-Mix Asphalt – Binder and Surface Course | July 2, 2019 | Nov. 1, 2019 |
| * 80398 | | Hot-Mix Asphalt – Longitudinal Joint Sealant | Aug. 1, 2018 | Nov. 1, 2019 |
| * 80406 | | Hot-Mix Asphalt – Mixture Design Verification and Production (Modified for I-FIT Projects) | Jan. 1, 2019 | Nov. 1, 2019 |
| * 80347 | | Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – Jobsite Sampling | Nov. 1, 2014 | July 2, 2019 |
| * 80383 | | Hot-Mix Asphalt – Quality Control for Performance | April 1, 2017 | July 2, 2019 |
| 80392 | 191 | X Lights on Barricades | Jan. 1, 2018 | |
| 80336 | | Longitudinal Joint and Crack Patching | April 1, 2014 | April 1, 2016 |
| 80411 | | Luminaires, LED | April 1, 2019 | |
| 80393 | | Manholes, Valve Vaults, and Flat Slab Tops | Jan. 1, 2018 | Mar. 1, 2019 |
| 80400 | | Mast Arm Assembly and Pole | Aug. 1, 2018 | |
| 80045 | | Material Transfer Device | June 15, 1999 | Aug. 1, 2014 |
| * 80418 | | Mechanically Stabilized Earth Retaining Walls | Nov. 1, 2019 | |
| 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 |
| 80412 | | Obstruction Warning Luminaires, LED | Aug. 1, 2019 | |
| 80349 | | Pavement Marking Blackout Tape | Nov. 1, 2014 | April 1, 2016 |
| 80371 | 193 | X Pavement Marking Removal | July 1, 2016 | |
| 80390 | 194 | X Payments to Subcontractors | Nov. 2, 2017 | |
| 80389 | 195 | X Portland Cement Concrete | Nov. 1, 2017 | |

| <u>File Name</u> | <u>Pg.</u> | <u>Special Provision Title</u> | <u>Effective</u> | <u>Revised</u> |
|------------------|------------|---|------------------|----------------|
| * 80359 | | Portland Cement Concrete Bridge Deck Curing | April 1, 2015 | Nov. 1, 2019 |
| 80300 | | Preformed Plastic Pavement Marking Type D - Inlaid | April 1, 2012 | April 1, 2016 |
| 80328 | 196 | X Progress Payments | Nov. 2, 2013 | |
| 3426I | | Railroad Protective Liability Insurance | Dec. 1, 1986 | Jan. 1, 2006 |
| 80157 | 197 | X Railroad Protective Liability Insurance (5 and 10) | Jan. 1, 2006 | |
| * 80306 | | Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS) | Nov. 1, 2012 | July 2, 2019 |
| 80407 | | Removal and Disposal of Regulated Substances | Jan. 1, 2019 | |
| * 80419 | 199 | X Silt Fence, Ground Stabilization and Riprap Filter Fabric | Nov. 1, 2019 | |
| 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 |
| 80408 | | Steel Plate Beam Guardrail Manufacturing | Jan. 1, 2019 | |
| 80413 | | Structural Timber | Aug. 1, 2019 | |
| 80397 | 202 | X Subcontractor and DBE Payment Reporting | April 2, 2018 | |
| 80391 | 203 | X Subcontractor Mobilization Payments | Nov. 2, 2017 | April 1, 2019 |
| 80317 | | Surface Testing of Hot-Mix Asphalt Overlays | Jan. 1, 2013 | Aug. 1, 2019 |
| 80298 | | Temporary Pavement Marking | April 1, 2012 | April 1, 2017 |
| 20338 | | Training Special Provision | Oct. 15, 1975 | |
| 80403 | | Traffic Barrier Terminal, Type 1 Special | Nov. 1, 2018 | |
| 80409 | 204 | X Traffic Control Devices – Cones | Jan. 1, 2019 | |
| 80410 | | Traffic Spotters | Jan. 1, 2019 | |
| 80318 | | Traversable Pipe Grate for Concrete End Sections | Jan. 1, 2013 | Jan. 1, 2018 |
| 80288 | 205 | X Warm Mix Asphalt | Jan. 1, 2012 | April 1, 2016 |
| 80302 | 207 | X Weekly DBE Trucking Reports | June 2, 2012 | April 2, 2015 |
| 80414 | | Wood Fence Sight Screen | Aug. 1, 2019 | |
| 80071 | 208 | X Working Days | Jan. 1, 2002 | |

The following special provisions are in the 2019 Supplemental Specifications and Recurring Special Provisions.

| <u>File Name</u> | <u>Special Provision Title</u> | <u>New Location(s)</u> | <u>Effective</u> | <u>Revised</u> |
|------------------|---|--|------------------|----------------|
| 80382 | Adjusting Frames and Grates | Articles 602.02(s) and (t), 1043.04, and 1043.05 | April 1, 2017 | |
| 80366 | Butt Joints | Article 406.08(c) | July 1, 2016 | |
| 80386 | Calcium Aluminate Cement for Class PP-5 Concrete Patching | Article 1001.01(e) | Nov. 1, 2017 | |
| 80396 | Class A and B Patching | Articles 442.06(a)(1) and (2) | Jan. 1, 2018 | Nov. 1, 2018 |
| 80377 | Portable Changeable Message Signs | Articles 701.20(h) and 1106.02(i) | Nov. 1, 2016 | April 1, 2017 |
| 80385 | Portland Cement Concrete Sidewalk | Article 424.12 | Aug. 1, 2017 | |

The following special provision has been deleted from use.

| <u>File Name</u> | <u>Special Provision Title</u> | <u>Effective</u> | <u>Revised</u> |
|------------------|--|------------------|----------------|
| 80246 | Hot-Mix Asphalt – Density Testing of Longitudinal Joints | Jan. 1, 2010 | Aug. 1, 2018 |
| 80399 | Hot-Mix Asphalt – Oscillatory Roller | Aug. 1, 2018 | Nov. 1, 2018 |
| 80376 | Hot-Mix Asphalt – Tack | Nov. 1, 2016 | |
| 80401 | Portland Cement Concrete Pavement Connector for Bridge Approach Slab | Aug. 1, 2018 | |

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the “Standard Specifications for Road and Bridge Construction” adopted April 1, 2016 (hereinafter referred to as the Standard Specifications); the latest edition of the “Illinois Manual on Uniform Traffic Control Devices for Streets and Highways” in effect on the date of invitation for bids; and the “Supplemental Specifications and Recurring Special Provisions” indicated on the check sheet provided herein, all of which apply to and govern the construction of

Cal-Sag Greenway Trail – Blue Island West Segment
131st Street to Ashland Avenue
Section: 08-00178-03-BT
Project No.: CMM-4003(602)
Job No.: C91-093-16
Contract No.: 61F17
Cook County

In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT

The bike trail project is located within the limits of the City of Blue Island, Cook County. The project starts on 131st Street just west of Francisco Avenue and heads easterly on 131st Street to Francisco Avenue. North along Francisco Street, the project continues east on Vermont Street to Chatham Street and south to Canal Street. At Canal Street the project heads east along the south side of the Cal-Sag Channel terminating at Ashland Avenue. The total gross and net length of the improvement is 9,877.39 feet (1.87 miles).

DESCRIPTION OF PROJECT

The work consists of a 10 foot wide asphalt bike trail, grass shoulders, pavement markings, drainage improvements, pipe culverts with end sections, grading, seeding, signing, pavement marking, erosion control, tree removal, traffic control, along with all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

AVAILABLE REPORTS

No project specific reports were prepared.

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

- Record structural plans
- Preliminary Site Investigation (PSI)
- Preliminary Environmental Site Assessment (PESA)
- Soils/Geotechnical Report
- Boring Logs
- Pavement Cores
- Location Drainage Study (LDS)
- Hydraulic Report
- Noise Analysis
- Other: Project Development Report (4/15/2015), Project Development Report Addendum (5/01/2019), Wetland Report (2/25/2011)

Those seeking these reports should request access from:

Brian Czosnyka, Project Manager
AECOM
Brian.Czosnyka@aecom.com

MAINTENANCE OF ROADWAYS

Effective: September 30, 1985

Revised: November 1, 1996

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

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

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 Off-Rd Operations, 2L, 2W, 15' to 24" From Pavement Edge
- 701011-04 Off-Rd Moving Operations, 2L, 2W, Day Only
- 701301-04 Lane Closure, 2 Lane, 2-Way, Short Time Operations
- 701311-03 Lane Closure, 2 Lane, 2-Way, Moving Operations Day Only
- 701427-05 Lane Closure, Multilane, Intermittent or Moving Oper., For Speeds ≤ 40 mph
- 701501-06 Urban Lane Closure, 2 Lane, 2-Way, Undivided
- 701606-10 Urban Lane Closure, Multilane, 2-Way with Mountable Median
- 701701-10 Urban Lane Closure, Multilane Intersection
- 701801-06 Sidewalk Corner or Crosswalk Closure
- 701901-08 Traffic Control Devices

DETAILS:

- TC-10 Traffic Control and Protection for Side Roads, Intersections and Driveways
- TC-13 Typical Pavement Markings
- TC-22 Arterial Information Sign

SPECIAL PROVISIONS:

- Maintenance of Roadways
- Public Convenience and Safety (Dist. 1)
- Pavement Marking Removal (BDE)
- Equipment Parking and Storage (BDE)
- Lights on Barricades (BDE)

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.

No conflicts to be resolved.

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.

| LOCATION | TYPE | DESCRIPTION | OWNER | ACTION |
|---|-------------|--|-----------------|---|
| West of Division Street Sta. 380+96.29 | Electrical | Aerial lines between power poles over bike trail construction limits | COMED | Aerial lines shall be watched by the Contractor during construction. |
| East of Division Street Sta. 381+63, 20.6' RT | Telecom | Telecommunications Pedestal outside of Bike Trail Construction limits | AT&T | Telecom equipment shall be watched by the Contractor during construction. |
| East of Division Street Sta. 381+52, 31' RT | Telecom | Video Ready Access Device (VRAD) Cabinet outside of Bike Trail Construction limits | AT&T | Telecom equipment shall be watched by the Contractor during construction. |

| | | | | |
|---|---------|--|-----------------|---|
| East of Division Street Sta. 381+66, 31' RT | Telecom | Service Area Interface (SAI) Cabinet outside of Bike Trail Construction limits | AT&T | Telecom equipment shall be watched by the Contractor during construction. |
|---|---------|--|-----------------|---|

No facilities requiring extra consideration.

The following contact information is what was used during the preparation of the plans as provided by the owner of the facility.

| Agency/Company Responsible to Resolve Conflict | Name of contact | Address | Phone | e-mail address |
|--|-----------------------------------|--|--------------|--|
| AT&T Service, Inc. | Larry Smith | 1000 Commerce Dr. Floor 1 Oak Brook, IL 60523 | 847-867-9403 | LS6243@att.com |
| COMCAST | Robert Schulter | 688 Industrial Drive Elmhurst, IL 60126 | 224-229-5849 | N/A |
| NICOR | Bruce Koppang | 1844 Ferry Road Naperville, IL 60563 | 630-388-3046 | bkoppan@agresources.com |
| COMED | Likowo Ndobedi | 1 Lincoln Center Oakbrook Terrance, IL 60181 | 630-890-0883 | Likowo.Ndobedi@ComEd.com |
| MWRD | Joseph Schuessler, PE, CFM | Engineering Dept. 111 East Erie Street Chicago, IL 60611-3154 | 312-751-3236 | SchuesslerJ@mwr.org |

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.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

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

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

Site 2604A-1 (Commercial Buildings)

- Station 312+00 to Station 313+22 (CL Vermont Street), 0 to 30 feet LT, (Commercial Buildings, PESA site 2604A-1, 1 2810-2872 Vermont Street, Blue Island). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameters: manganese, benzo(a)pyrene.

Site 2604A-5 (Vacant Land and Stony Creek)

- Station 311+15 to Station 312+00 (CL Vermont Street), 0 to 35 feet RT, (Vacant land and Stony Creek, PESA site 2604A-5, 2800 block of Vermont Street, Blue Island). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameters: lead, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, arsenic, manganese.
- Station 312+00 to Station 313+00 (CL Vermont Street), 0 to 35 feet RT, (Vacant land and Stony Creek, PESA site 2604A-5, 2800 block of Vermont Street, Blue Island). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameters: benzo- (a)pyrene, benzo(b)fluoranthene, manganese.
- Station 313+00 to Station 314+05 (CL Vermont Street), 0 to 35 feet RT, (Vacant land and Stony Creek, PESA site 2604A-5, 2800 block of Vermont Street, Blue Island). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameters: arsenic, lead, benzo(a)pyrene, manganese.
- Station 314+05 to Station 316+30 (CL Vermont Street), 0 to 35 feet RT, (Vacant land and Stony Creek, PESA site 2604A-5, 2800 block of Vermont Street, Blue Island). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameters: lead, benzo(a)pyrene, manganese.

Site 2604A-6 (CSX Signal Department)

- Station 309+70 to Station 310+85 (CL Vermont Street), 0 to 35 feet RT, (CSX Signal Department, PESA site 2604A-6, 2740 Vermont Street, Blue Island). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameters: benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, manganese.
- Station 310+85 to Station 311+15 (CL Vermont Street), 0 to 35 feet RT, (CSX Signal Department, PESA site 2604A-6, 2740 Vermont Street, Blue Island). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameters: benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, arsenic, lead, manganese.

Site 2604A-13 (Bridge)

- Station 406+60 to Station 407+35 (Cal-Sag Bike Trail, East), 30 feet LT to 30 feet RT, (Bridge, PESA site 2604A-13, 13200 block of I-57, Blue Island). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameter: lead.

Site 2604A-14 (Vacant Land)

- Station 407+35 to Station 408+05 (Cal-Sag Bike Trail, East), 30 feet LT to 30 feet RT, (Vacant Land, PESA site 2604A-14, 13200 block of I-57, Blue Island). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance with Article 669.09. Contaminants of concern sampling parameter: manganese.

Work Zones

Three distinct OSHA HAZWOPER work zones (exclusion, decontamination, and support) shall apply to projects adjacent to or within sites with documented leaking underground storage tank (LUST) incidents, or sites under management in accordance with the requirements of the Site Remediation Program (SRP), Resource Conservation and Recovery Act (RCRA), or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as deemed necessary. For this project, the work zones apply for the following ISGS PESA Sites: **Site 1 and Site 6.**

Additional information on the above sites collected during the Phase I Engineering process is available through the District's Environmental Studies Unit (DESU).

Effective: January 1, 2019

Revise Section 669 of the Standard Specifications to read:

SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

669.01 Description. This work shall consist of the transportation and proper disposal of contaminated soil and groundwater. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.

669.02 Equipment. The Contractor shall notify the Engineer of the delivery of all excavation, storage, and transportation equipment to a work area location. The equipment shall comply with OSHA and American Petroleum Institute (API) guidelines and shall be furnished in a clean condition. Clean condition means the equipment does not contain any residual material classified as a non-special waste, non-hazardous special waste, or hazardous waste. Residual materials include, but are not limited to, petroleum products, chemical products, sludges, or any other material present in or on equipment.

Before beginning any associated soil or groundwater management activity, the Contractor shall provide the Engineer with the opportunity to visually inspect and approve the equipment. If the equipment contains any contaminated residual material, decontamination shall be performed on the equipment as appropriate to the regulated substance and degree of contamination present according to OSHA and API guidelines. All cleaning fluids used shall be treated as the contaminant unless laboratory testing proves otherwise.

669.03 Pre-construction Submittals. Prior to beginning this work, or working in areas with regulated substances, the Contractor shall submit a Regulated Substance Pre-Construction Plan (RSPCP) to the Engineer for review and approval using form BDE 2730. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

As part of the RSPCP, the qualifications of Contractor(s) or firm(s) performing the following work shall be listed.

- (a) On-Site Monitoring. Qualification for on-site monitoring of regulated substance work and on-site monitoring of UST removal requires either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and special waste operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements.

Qualification for each individual performing on-site monitoring requires a minimum of one-year of experience in similar activities as those required for the project.

- (b) Underground Storage Tank. Qualification for underground storage tank (UST) work requires licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

The Engineer will require up to 30 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 30 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field.

CONSTRUCTION REQUIREMENTS

669.04 Contaminated Soil and/or Groundwater Monitoring. Prior to beginning excavation, the Contractor shall mark the limits of removal for approval by the Engineer. Once excavation begins, the work and work area involving regulated substances shall be monitored by qualified personnel. The qualified personnel shall be on-site continuously during excavation and loading of material containing regulated substances. The qualified personnel shall be equipped with either a photoionization detector (PID) (minimum 10.6eV lamp), or a flame ionization detector (FID), and other equipment, as appropriate, to monitor for potential contaminants associated with volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs). The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily, and as field and weather conditions change. Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

The qualified personnel shall document field activities using form BDE 2732 (Regulated Substances Monitoring Daily Record) including the name(s) of personnel conducting the monitoring, weather conditions, PID or FID calibration records, a list of equipment used on-site, a narrative of activities completed, photo log sheets, manifests and landfill tickets, monitoring results, how regulated substances were managed and other pertinent information.

Samples will be collected in accordance with the RSPCP. Samples shall be analyzed for the contaminants of concern (COCs), including pH, based on the property's land use history, the encountered abnormality and/or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605. The analytical results shall serve to document the level of contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, collection location and depth, and any other relevant observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846; "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039; and "Methods for the Determination of Organic Compounds in Drinking Water, Supplement III", EPA 600/R-95/131, August 1995. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective.

669.05 Contaminated Soil and/or Groundwater Management and Disposal. The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
- (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
 - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an USFO within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the construction limits or managed and disposed off-site as "uncontaminated soil" according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.
- (1) The pH of the soil is less than 6.25 or greater than 9.0.
 - (2) The soil exhibited PID or FID readings in excess of background levels.

- (c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 IAC 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way or managed and disposed off-site as “uncontaminated soil” according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.
- (d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste. The groundwater shall be containerized and trucked to an off-site treatment facility or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sewer.

All groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall be responsible for transporting and disposing all material classified as a non-special waste, special waste, or hazardous waste from the job site to an appropriately permitted landfill facility. The transporter and the vehicles used for transportation shall comply with all federal, state, and local rules and regulations governing the transportation of non-special waste, special waste, or hazardous waste.

All equipment used by the Contractor to haul contaminated material to the landfill facility shall be lined with a 6 mil (150 micron) polyethylene liner and securely covered during

transportation. The Contractor shall obtain all documentation including any permits and/or licenses required to transport the contaminated material to the disposal facility.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Engineer shall coordinate with the Contractor on the completion of all documentation. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall coordinate for waste disposal approval with the disposal facility. After the Contractor completes these activities and upon receipt of authorization from the Engineer, the Contractor shall initiate the disposal process.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). The Engineer shall maintain the file for all such documentation. For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation the Contractor (or subcontractor, if a subcontractor is used for transportation) is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.

The Contractor shall schedule and arrange the transport and disposal of each load of contaminated material produced. The Contractor shall make all transport and disposal arrangements so no contaminated material remains within the project area at the close of business each day. Exceptions to this specification require prior approval from the Engineer within 24 hours of close of business. The Contractor shall be responsible for all other pre-disposal/transport preparations necessary daily to accomplish management activities.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill mandated by definition of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by definition of the contaminant and whether the disposal facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The Contractor shall be responsible for coordinating permits with the IEPA. The use of a Contractor selected landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

669.06 Non-Special Waste Certification. An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

- (a) Definition. A waste is considered a non-special waste as long as it is not:
- (1) a potentially infectious medical waste;
 - (2) a hazardous waste as defined in 35 IAC 721;
 - (3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 IAC 811.107;
 - (4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR 61.141;
 - (5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;
 - (6) a material subject to the waste analysis and recordkeeping requirements of 35 IAC 728.107 under land disposal restrictions of 35 IAC 728;
 - (7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or
 - (8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.
- (b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:
- (1) the means by which the generator has determined the waste is not a hazardous waste;
 - (2) the means by which the generator has determined the waste is not a liquid;
 - (3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;
 - (4) if the waste does not undergo testing, an explanation as to why no testing is needed;
 - (5) a description of the process generating the waste; and
 - (6) relevant material safety data sheets.

669.07 Temporary Staging. The Contractor shall excavate and dispose of all waste material as mandated by the contaminants without temporary staging. If circumstances require temporary staging, he/she shall request in writing, approval from the Engineer.

When approved, the Contractor shall prepare a secure location within the project area capable of housing containerized waste materials. The Contractor shall contain all waste material in leak-proof storage containers such as lined roll-off boxes or 55 gal (208 L) drums, or stored in bulk fashion on storage pads. The design and construction of such storage pad(s) for bulk materials shall be subject to approval by the Engineer. The Contractor shall place the staged storage containers on an all-weather gravel-packed, asphalt, or concrete surface. The Contractor shall maintain a clearance both above and beside the storage units to provide maneuverability during loading and unloading. The Contractor shall provide any assistance or equipment requested by the Engineer for authorized personnel to inspect and/or sample contents of each storage container. All containers and their contents shall remain intact and undisturbed by unauthorized persons until the manner of disposal is determined. The Contractor shall keep the storage containers covered, except when access is requested by authorized personnel of the Department. The Engineer shall authorize any additional material added to the contents of any storage container before being filled.

The Contractor shall ensure the staging area is enclosed (by a fence or other structure) to ensure direct access to the area is restricted, and he/she shall procure and place all required regulatory identification signs applicable to an area containing the waste material. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall clearly mark all containers in permanent marker or paint with the date of waste generation, location and/or area of waste generation, and type of waste (e.g., decontamination water, contaminated clothing, etc.). The Contractor shall place these identifying markings on an exterior side surface of the container. The Contractor shall separately containerize each contaminated medium, i.e. contaminated clothing is placed in a separate container from decontamination water. Containers used to store liquids shall not be filled in excess of 80 percent of the rated capacity. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could classify the material as a hazardous waste in the container.

The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

669.08 Underground Storage Tank Removal. For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the

Department. The Department's Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the "owner" or "operator" of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining all permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Adm. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport, and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Adm. Code Part 734.210(h) after the required backfill has been removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the DESU. Upon confirmation of a release of contaminants from the UST and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the UST is located and the DESU Manager);

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

- (a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank
- (b) Identify and mitigate fire, explosion and vapor hazards;
- (c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and

- (d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements).

The UST excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. The material shall be approved prior to placement. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

669.09 Regulated Substance Final Construction Report. Not later than 90 days after completing this work, the Contractor shall submit a Regulated Substance Final Construction Report (RSFCR) to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

669.10 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

669.11 Basis of Payment. The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

On-site monitoring of regulated substances, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof, for
ON-SITE MONITORING OF REGULATED SUBSTANCES.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of removing a UST, soil excavation, soil and content sampling, and the excavated soil, UST content, and UST disposal will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for

NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

Payment for temporary staging, if required, will be paid for according to Article 109.04.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

The sampling and testing associated with this work will be paid for as follows.

- (a) BETX Soil/Groundwater Analysis. When the contaminants of concern are gasoline only, soil or groundwater samples shall be analyzed for benzene, ethylbenzene, toluene, and xylenes (BETX). The analysis will be paid for at the contract unit price per each for BETX SOIL ANALYSIS and/or BETX GROUNDWATER ANALYSIS using EPA Method 8021B.
- (b) BETX-PNAS Soil/Groundwater Analysis. When the contaminants of concern are middle distillate and heavy ends, soil or groundwater samples shall be analyzed for BETX and polynuclear aromatics (PNAS). The analysis will be paid for at the contract unit price per each for BETX-PNAS SOIL ANALYSIS and/or BETX-PNAS GROUNDWATER ANALYSIS using EPA Method 8021B for BETX and EPA Method 8310 for PNAS.
- (c) Priority Pollutants Soil Analysis. When the contaminants of concern are used oils, soil samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, and priority pollutants metals. The analysis will be paid for at the contract unit price per each for PRIORITY POLLUTANTS SOIL ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs, and using an ICP instrument and EPA Methods 6010B and 7471A for metals.
- (d) Priority Pollutant Groundwater Analysis. When the contaminants of concern are used oils, non-petroleum material, or unknowns, groundwater samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, and priority pollutants metals. The analysis will be paid for at the contract unit price per each for PRIORITY POLLUTANTS GROUNDWATER ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs, and EPA Methods 6010B and 7470A for metals.

- (e) Target Compound List (TCL) Soil Analysis. When the contaminants of concern are unknowns or non-petroleum material, soil samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCS, priority pollutants metals, pesticides, and Resource Conservation and Recovery Act (RCRA) metals by the toxicity characteristic leaching procedure (TCLP). The analysis will be paid for at the contract unit price per each for TCL SOIL ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCS, EPA Method 8081 for pesticides, and ICP instrument and EPA Methods 6010B, 7471A, 1311 (extraction), 6010B, and 7470A for metals.
- (f) Soil Disposal Analysis. When the waste material for disposal requires sampling for disposal acceptance, the samples shall be analyzed for TCLP VOCs, SVOCS, RCRA metals, pH, ignitability, and paint filter test. The analysis will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS using EPA Methods 1311 (extraction), 8260B for VOCs, 8270C for SVOCS, 6010B and 7470A for RCRA metals, 9045C for pH, 1030 for ignitability, and 9095A for paint filter.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT.”

80407

PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION

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

All drainage structures are to be kept free of any debris resulting from construction operations. All work and material necessary to prevent accumulation of debris in the drainage structures will be considered as incidental to the Contract. Any accumulation of debris in the drainage structures resulting from construction operations shall be removed at the Contractor's own expense and no extra compensation will be allowed.

During construction operations, whenever any loose material is deposited in the flow line of drainage structures, such that the natural flow of water is obstructed. It shall be removed by the Contractor at the close of each work day. At the conclusion of construction operations, all drainage structures shall be free from dirt and debris. The work specified above will not be paid for separately, but shall be included in the Pipe Culverts, Class A items being installed.

Unless reconstruction or adjustment of an existing drainage structure is called for on the Plans, the proposed work shall meet the existing elevations of these structures. Should reconstruction or adjustment of a drainage structure be required by the Engineer in the field, the necessary work and payment shall be done in accordance with Section 603 and Article 104.02, respectively, of the "Standard Specifications," unless otherwise noted on the Plans or in the Special Provisions.

The Contractor shall take the necessary precautions when working near or above existing sewers in order to protect these pipes during construction from any damage resulting from his operations. All work and material necessary to replace existing sewers damaged because of noncompliance with this provision shall be as directed by the Engineer in accordance with Section 550 of the "Standard Specifications" and at the Contractor's own expense, and no extra compensation will be allowed.

During construction, if the Contractor encounters or otherwise becomes aware of any sewers or underdrains within the R.O.W. or City of Blue Island property other than those shown on the Plans, he shall so inform the Engineer, who shall direct the work necessary to maintain the facilities in service and to protect them from damage during construction. Any sewers or underdrains to remain within the R.O.W. that are deemed necessary to be replaced by the Engineer shall be replaced or otherwise made to conform to the type requirements of Section 550 of the "Standard Specifications", and the work involved therein will be paid for as specified in Article 109.04 thereof.

DISPOSAL OF SURPLUS MATERIAL

The Contractor is prohibited from burning any material within or adjacent to the improvement. All excess or waste material shall be hauled away from the site of the improvement by the Contractor.

Surplus material does not include removal and disposal of regulated substances. Refer to the Removal and Disposal of Regulated Substances in these Special Provisions.

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

REMOVAL OF MISCELLANEOUS ITEMS

Regarding the removal and disposal of any existing fences, gates, signs (except traffic signs) concrete, brush or other miscellaneous items which may interfere with the proposed construction, and which are not paid for separately, the Contractor shall, with the approval of the Engineer, remove and dispose of these items outside the limits of the right-of-way at locations provided by the Contractor, and this work shall be considered as included in the cost of Earth Excavation.

Any existing features and appurtenances to remain which are damaged or removed by the Contractor shall be repaired or replaced by the Contractor at his/her expense.

REMOVAL OF EXISTING PAVEMENT AND APPURTENANCES

When portions of existing pavements or appurtenances are to remain in place, or adjacent existing pavements or appurtenances are to remain in place, the Contractor shall form a perpendicular straight joint by full-depth machine sawing at the ends and all edges of portions to be removed to prevent surface spalling when the existing pavement or appurtenance is

removed. Any damage to the existing pavement or appurtenance to remain in place shall be repaired or removed and replaced by the Contractor at his/her own expense, as directed by the Engineer. This work will not be measured or paid for separately, but shall be considered included in the item being removed.

PIPE CULVERTS

When installing pipe culverts and end sections all necessary grading to provide positive drainage to and from the culverts shall be considered included in the cost of this item. Restoration of the disturbed areas shall be paid for at the various line items for that work.

TRENCH BACKFILL, properly compacted in accordance with the Standard Specifications shall be used as backfill where the pipe crosses the path.

PROTECTION OF EXISTING TREES

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

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

A. Tree Trimming:

1. All tree branches that are less than 12 feet above the surface of the trail shall be removed by the Contractor. The Contractor shall perform the work in accordance with Article 201.05(c) for woody plant maintenance, tree care operations pruning, trimming, repairing, maintaining and removing trees and cutting brush. This work shall be included in the cost of mobilization and will not be paid for as separate items.

B. Earth Saw Cut of Tree Roots (Root Pruning):

1. Whenever proposed excavation falls within a drip-line of a tree, the Contractor shall:
 - a. Root prune 6-inches behind and parallel to the proposed edge of trench a neat, clean vertical cut to a minimum depth directed by the Engineer through all affected tree roots.
 - b. Root prune to a maximum width of 4-inches using a "Vermeer" wheel, or other similar machine. Trenching machines will not be permitted.
 - c. Exercise care not to cut any existing utilities.

- d. If during construction it becomes necessary to expose tree roots which have not been pre-cut, the Engineer shall be notified and the Contractor shall provide a clean, vertical cut at the proper root location, nearer the tree trunk, as necessary, by means of hand-digging and trimming with chain saw or hand saw. Ripping, shredding, shearing, chopping or tearing will not be permitted.
 - e. Top Pruning: When thirty percent (30%) or more of the root zone is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.
2. Whenever curb and gutter is removed for replacement, or excavation for removal of or construction of a structure is within the drip line/root zone of a tree, the Contractor shall:
 - a. Root prune 6-inches behind the curbing so as to neatly cut the tree roots.
 - b. Depth of cut shall be 12 inches for curb removal and replacement and 24 inches for structural work. Any roots encountered at a greater depth shall be neatly saw cut at no additional cost.
 - c. Locations where earth saw cutting of tree roots is required will be marked in the field by the Engineer.
 3. All root pruning work is to be performed through the services of a licensed arborist to be approved by the Engineer.

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

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

C. Temporary Fence:

1. The Contractor shall erect a temporary fence around all trees within the construction area to establish a "tree protection zone" before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored or vehicles driven or parked within the "tree protection zone".
2. The exact location and establishment of the "tree protection zone" fence shall be approved by the Engineer prior to setting the fence.
3. The fence shall be erected on three sides of the tree at the drip-line of the tree or as determined by the Engineer.

4. All work within the “tree protection zone” shall have the Engineer’s prior approval. All slopes and other areas not regarded should be avoided so that unnecessary damage is not done to the existing turf, tree root system ground cover.
5. The grade within the “tree protection zone” shall not be changed unless approved by the Engineer prior to making said changes or performing the work.

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

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

D. Tree Limb Pruning:

1. The Contractor shall inspect the work site in advance and arrange with the Roadside Development Unit (847.705.4171) to have any tree limbs pruned that might be damaged by equipment operations at least one week prior to the start of construction. Any tree limbs that are broken by construction equipment after the initial pruning must be pruned correctly within 72 hours.
2. Top Pruning: When thirty percent (30%) or more of the root zone of a tree is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.

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

E. Removal of Driveway Pavement and Sidewalk:

1. In order to minimize the potential damage to the tree root system(s), the Contractor will not be allowed to operate any construction equipment or machinery within the “tree protection zone” located between the curb or edge of pavement and the right-of-way property line.
2. Sidewalk to be removed in the areas adjacent to the “tree protection zones” shall be removed with equipment operated from the street pavement. Removal equipment shall be Gradall (or similar method), or by hand or a combination of these methods. The method of removal shall be approved by the Engineer prior to commencing any work.
3. Any pavement or pavement related work that is removed shall be immediately disposed of from the area and shall not be stockpiled or stored within the parkway area under any circumstances.

F. Backfilling:

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

G. Damages:

1. In the event that a tree not scheduled for removal is injured such that potential irreparable damage may ensue, as determined by the Engineer, the Contractor shall be required to remove the damaged tree and replace it on a three to one (1:1) basis, at his own expense. The Engineer will select replacement trees from the pay items already established in the contract.
2. The Contractor shall place extreme importance upon the protection and care of trees and shrubs which are to remain during all times of this improvement. It is of paramount importance that the trees and shrubs which are to remain are adequately protected by the Contractor and made safe from harm and potential damage from the operations and construction of this improvement.

FAILURE TO COMPLETE PLANT CARE AND ESTABLISHMENT WORK ON TIME

Should the Contractor fail to complete the plant care during the Period of Establishment and/or watering within the scheduled time frame as specified in the Special Provision for “Root Pruning Method Container Grown Woody Plants” and “Planting Woody Plants”, or within 24 hours notification from the Engineer, or within such extended times as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount of \$50.00 per tree/per day and \$40.00 per shrub/per day, not as penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

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

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

SEEDING, CLASS 4A (MODIFIED)
SEEDING, CLASS 5 (MODIFIED)

This work shall consist of preparing the seed bed, placing the seed, and other materials required in the seeding operation in areas as shown in the plans.

All work, materials and equipment shall conform to Section 250 and 1081 of the Standard Specifications except as modified herein.

The Class 4A (Modified) seed mixture and the Class 5 (Modified) seed mixture shall be supplied in pounds of Pure Live Seed in separate bags of three mix components: Temporary Cover, Permanent Grasses, and Forbs. All native seed species will be local genotype and verified that original seed collection source must originate from a radius of 200 miles from the project site. The Class 5 (Modified) seed mix shall be supplied with the appropriate inoculants. The seed shall be sown as soon as possible after inoculation. Seed that has been stored more than 30 days after inoculation shall be reinoculated before sowing. Fertilizer is not required.

Article 250.07 Seeding Mixtures – Add the following to Table 1:

| CLASS – TYPE | SEEDS | PURE LIVE SEED LB/ACRE |
|--|--|------------------------|
| 4A (Modified) Short Prairie Grass Mixture: | | 9.5 |
| | Bouteloua curtipendula (Side-Oats Grama) | 3.5 |
| | Elymus canadensis (Canada Wild Rye) | 2.0 |
| | Schizachyrium scoparium (Little Bluestem) | 4.0 |

| CLASS – TYPE | SEEDS | PURE LIVE SEED LB/ACRE |
|--|--|------------------------|
| 5 (Modified) Short Prairie Forb Mixture: | | 6.0 |
| | Amorpha canescens (Leadplant) | 0.10 |
| | Astragalus canadensis (Canada Milk Vetch) | 0.20 |
| | Asclepias syriaca (Common Milkweed) | 0.15 |
| | Asclepias tuberosa (Butterfly Milkweed) | 0.10 |
| | Baptisia australis (Blue Wild Indigo) | 0.10 |
| | Coreopsis palmata (Prairie Coreopsis) | 0.10 |
| | Chamecrista fasciculata (Partridge Pea) | 0.30 |
| | Dalea candida (White Prairie Clover) | 0.25 |

| | |
|--|------|
| Dalea purpurea (Purple Prairie Clover) | 0.30 |
| Echinacea pallida (Pale Purple Coneflower) | 0.10 |
| Echinacea purpurea (Purple Coneflower) | 0.35 |
| Eryngium yuccifolium (Rattlesnake Master) | 0.20 |
| Liatris pycnostachya (Prairie Blazing Star) | 0.10 |
| Monarda fistulosa (Wild Bergamot) | 0.10 |
| Penstemon digitalis (Foxglove Beardtongue) | 0.20 |
| Ratibida pinnata (Yellow Coneflower) | 0.15 |
| Rudbeckia hirta (Black-eyed Susan) | 3.0 |
| Symphotrichum oolentangiense (Sky Blue Aster) | 0.10 |
| Verbena stricta (Hoary Vervain) | 0.20 |
| Zizia aurea (Golden Alexander) | 0.10 |

| | |
|--|-----------|
| Temporary Cover | (lb/acre) |
| Oct 15 to Oct 31: Elymus canadensis (Canada Wild Rye) | 3.0 |
| Nov 1 to May 15 : Avena sativa (Annual Oats) | 25.0 |

Variation in the Class 3, 4, 5, or 6 seed quantities or varieties may be allowed in the event of a crop failure or other unforeseen conditions. Quantities of proposed substitutions shall be determined by seed count. The Contractor shall provide for the approval of the Engineer a written description of the proposed changes to the Class 3, 4, 5, or 6 Mixture(s), the reasons for the change, and the name of the seed suppliers who were contacted in an effort to obtain the specified species. Adjustments will be made at no cost to the contract. Approval of substitutes shall in no way waive any requirements of the contract

Seeding Time:

Seeding shall be completed between October 15 to May 15 but not when raining or when the ground is covered with snow, unless prior written approval is received from Engineer. No seed shall be sown when the ground is not in proper condition for seeding. Seeding done outside of this time frame will not be measured for payment unless approved in writing by the Engineer in advance.

The Contractor shall schedule work so that final grade is achieved during the specified seeding times. Any seeding installed on or after March 1 must be incorporated into the soil surface, but

no deeper than $\frac{1}{4}$ inch, such as by rangeland type seed drill, harrow, hand rake, or other method approved by the Engineer.

Bagging, Transporting, and Storing Seed:

Seed mixtures of the specified classes shall be thoroughly mixed, labeled and bagged by the supplier. Purity and germination tests no older than twelve months old must be submitted for all seed supplied to verify quantities of bulk seed required to achieve LB PLS specified.

Seed shall be thoroughly mixed, labeled and bagged by the supplier. Seed shall be bagged, transported, and stored in such a manner to protect it from damage and to maintain the viability of the seed. All seed mixtures shall be brought to the site in clearly labeled and unopened bags.

Seed shall be adequately protected from rain, temperature extremes, rodents, insects, and other such factors that could adversely affect seed viability during transport or while being stored prior to planting. Bags of seed that are leaking, wet, moldy, or otherwise damaged shall be rejected and promptly removed from the site of work. Prior to application, the Engineer must approve the seed mix in the bags on site.

Layout of Seeding:

The Contractor shall be responsible for field verifying the acreage of the area(s) to be seeded. The amount of seed ordered shall match the area(s) to be seeded during the pending planting season. A minimum of 30 days shall be allowed for seed acquisition, testing, and inspection.

The Contractor shall demarcate all areas to be seeded and estimate quantities of each area to determine the quantity of seed necessary to achieve the specified seed rate per acre. The Contractor shall delineate the perimeter of the seedbed with wooden lathe. The wooden lathe shall remain in place. The contractor shall provide a minimum of seven calendar days' notice to the Engineer to allow for review and approval of seeding layout.

Inspection:

The Engineer must witness the delivery of seed with original labels attached in the field. A bag ticket must be affixed to each bag of seed upon delivery and shall not be removed until the Engineer has reviewed and accepted each bag of seed. The label shall bear the dealer's guarantee of mixture and year grown, purity and germination, and date of test.

Seed Bed Preparation:

All area(s) to be seeded must be properly prepared prior to planting seed.

Bare earth seeding refers to sowing seed upon soils with no existing vegetative cover. In areas with existing vegetation, the vegetation shall be eradicated as specified or as directed by the Engineer. Seed bed preparation shall not be started until all requirements of Section 212 have been completed. The area to be seeded shall be worked to a minimum depth of 3 in. (75 mm) with a disk, tiller, box rake, or other equipment approved by the Engineer. In areas with heavy soils, tilling or power raking will be required to achieve the proper depth. All soil clods shall be reduced to a size not larger than $\frac{1}{2}$ in. (13 mm) in the largest dimension to create a friable, pulverized topsoil surface suitable for seeding. Dragging the soil surface with the blade of a loader or dozer will not be an acceptable method of seed bed preparation. The prepared surface shall be relatively free of weeds, stones, roots, sticks, debris, rills, gullies, crusting,

caking, and compaction. No seed shall be sown until the seed bed has been approved by the Engineer.

Seeding Methods:

No seed shall be sown when wind gusts exceed 25 miles per hour or when the ground is not in a proper condition for seeding, nor shall any seed be sown until the purity test has been completed for the seeds to be used, and said tests show that the seed meets the noxious weed seed requirements. All equipment shall be approved by the Engineer prior to being used. Prior to starting work, seeders shall be calibrated and adjusted to sow seeds at the required seeding rate. Equipment shall be operated in a manner to ensure complete coverage of the entire area to be seeded. The Engineer shall be notified 48 hours prior to beginning the seeding operations so that the Engineer may determine by trial runs that a calibration of the seeder will provide uniform distribution at the specified rate per acre.

All legumes (Canada Milk Vetch, White Prairie Clover, Purple Prairie Clover, White Wild Indigo, and Illinois Bundleflower) shall be inoculated with the proper rhizobial bacteria in the amounts and manner recommended by the seed supplier before sowing or being mixed with other seeds for sowing. The inoculant shall be furnished by the Contractor and shall be approved by the Engineer.

Seeding Classes 3, 4, 5, and 6 shall be sown with a broadcast seeder or a rangeland type seed drill.

Hand broadcasting and other methods of sowing seed will be allowed in special circumstances as approved by the Engineer. Special circumstances include but are not necessarily limited to steep slopes (over 1:3 (V:H)), inaccessible areas, wet areas, or other unique situations where the use of the specified equipment is not possible.

Method of Measurement:

SEEDING, CLASS 4A (MODIFIED) and SEEDING, CLASS 5 (MODIFIED) will be measured for payment in acres of surface area of seeding for the seed mix type specified.

Basis of Payment:

SEEDING, CLASS 4A (MODIFIED) and SEEDING, CLASS 5 (MODIFIED) shall be paid at the Contract unit price per acre. Payment shall be in full for seed, planting, and furnishing all labor to complete the work as set forth above.

EROSION CONTROL BLANKET

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

Delete Article 1081.10(a) Excelsior Blanket.

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

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

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

Delete Article 1081.10(d) Wire Staples.

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

Biodegradable plastic stakes will be allowed. The biodegradable plastic anchor shall be approximately 6 in (15.24 cm) in length. No metal wire stakes will be allowed.

PLANTING WOODY PLANTS

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

Delete Article 253.03 Planting Time and substitute the following:

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

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

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

- Maple (Acer spp.)
- Buckeye (Aesculus spp.)
- Serviceberry (Amelanchier spp.)
- Birch (Betulus spp.)
- American Hornbeam (Carpinus caroliniana)
- Hickory (Carya spp.)
- Hackberry (Celtis occidentalis)
- Eastern Redbud (Cercis canadensis)
- Hawthorn (Crataegus spp.)
- Walnut (Juglans spp.)

- Tuliptree (*Liriodendron* spp.)
- Crabapple (*Malus* spp.)
- Black Tupelo (*Nyssa sylvatica*)
- American Hophornbeam (*Ostrya virginiana*)
- Oak (*Quercus* spp.)
- Sassafras (*Sassafras albidum*)
- Bald Cypress (*Taxodium distichum*)
- American Linden (*Tilia americana*)

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

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

Add the following to Article 253.05 Transportation:

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

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

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

The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the use of an engineer's scale to determine some dimensions. Tree locations within each planting area shall be marked with a different color stake/flag and labeled to denote the different tree species. Shrub beds limits must be painted.

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

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

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

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

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

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

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

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

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

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

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

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

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

When planting shrubs in shrub beds as shown on the plans or as directed by the Engineer, spade a planting bed edge at approximately a 45-degree angle and to a depth of approximately 3-inches around the perimeter of the shrub bed prior to placement of the mulch. Remove any debris created in the spade edging process and dispose of as specified in Article 202.03.

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

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

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

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

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

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

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

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

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

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

Add the following to Article 253.10 (b):

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

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

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

Delete Article 253.11 and substitute the following:

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

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

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

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

Delete Article 253.12 Wrapping and substitute the following:

Any paper or cardboard trunk wrap must be removed before placing the tree in the tree hole to inspect the condition of the trunks. Within 48 hours after planting, screen mesh shall be wrapped around the trunk of all deciduous trees with a caliper of 1-inch or greater. Multi-stem or clump form trees, with individual stems having a caliper of 1-inch or greater, shall have each stem wrapped separately. The screen mesh shall be secured to itself with staples or single wire strands tied to the mesh. Trees shall be wrapped at time of planting, before the installation of mulch. The lower edge of the screen wire shall be in continuous contact with the ground and shall extend up to a minimum of 36-inches or to the lowest major branch, whichever is less. Replacement plantings shall not be wrapped.

Delete Article 253.13 Bracing and substitute with the following:

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

During the life of the contract, within 72 hours the Contractor shall straighten any tree that deviates from a plumb position. The Contractor shall adjust backfill compaction and install or

adjust bracing on the tree as necessary to maintain a plumb position. Replacement trees shall not be braced.

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

This period shall begin in April 1 and end in November 30 of the same year.

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

This may require pruning, cultivating, tightening and repairing supports, repair of wrapping, and furnishing and applying sprays as necessary to keep the plants free of insects and disease. The Contractor shall provide plant care a minimum of every two weeks, or within 3 days following notification by the Engineer. All requirements for plant care shall be considered as included in the cost of the contract.

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

During the Period of Establishment watering shall be performed at least every two weeks during the months of April through November. The contractor shall apply a minimum of 35 gallons of water per tree, 25 gallons per large shrub, 15 gallons per small shrub, and 4 gallons per vine. The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions.

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

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

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

The contractor shall inspect all trees, shrubs, and vines for pests and diseases at least every two weeks during the months of initial planting through final acceptance. Contractor must identify and monitor pest and diseases and determine action required to maintain the good appearance, health and, top performance of all plant material. Contractor shall notify the Engineer with their inspection findings and recommendations within twenty-four hours of findings. The recommendations for action by the Contractor must be reviewed and by the Engineer for approval/rejection. All approved corrective activities will be considered as included in the cost of the contract and shall be performed within 48 hours following notification by the Engineer.

Delete Article 253.16 Method of Measurement and substitute with the following:

Trees, shrubs, evergreens, vines, and seedlings will be measured as each individual plant.

- (a) This work will be measured for initial payment, in place, for plant material found to be in live and healthy condition by June 1.
- (b) This work will be measured for final payment, in place, for plant material found to be in live and healthy condition upon final acceptance by the department.

Delete Article 253.17 Basis of Payment and substitute the following:

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

- (a) Initial Payment. Upon completion of planting, mulch covering, wrapping, and bracing, 75 percent of the pay item(s) will be paid.
- (b) Final Payment. After the successful completion of all required replacement plantings, clean-up work and receipt of the "Final Acceptance of Landscape Work" memorandum from the Bureau of Maintenance, or upon execution of a third-party bond, the remaining 25 percent of the pay item(s) will be paid.

REQUIRED INSPECTION OF WOODY PLANT MATERIAL

Delete Article 1081.01(a)(5) and substitute the following:

The place of growth for all material, and subsequent inspection, must be located within 200 miles of the project.

Delete Article 1081.01(c)(1) and substitute the following:

Inspection of plant material will be made at the nursery by the Engineer, or a duly authorized representative of the Department; all plant material must be in the ground of the nursery supplying the material.

The Contractor shall provide the Engineer a minimum of 50 calendar days advance notice of the plant material to be inspected. Written certification by the Nursery will be required certifying that the plants are true to their species and/or cultivar specified in the plans.

The Department reserves the right to place identification seals on any or all plants selected. No trees shall be delivered without IDOT seal. Plant material not installed within 60 days of initial inspection will be required to be re-inspected.

SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE)

Description: This work shall consist of the installation of a solar powered crosswalk system with flashing LED beacons.

The crosswalk system shall consist of two pole assemblies. All pole assemblies shall contain one or more Warning Flashing LED Beacons and Warning Static Signs, a Solar Powered

Control Cabinet, and a Pedestrian Push Button for system activation. All Control Cabinets in the Crosswalk System shall be synchronized by the 900 Mhz Wireless Transceivers.

General Requirements: The Solar-Powered Flashing Beacon Manufacturer shall have a minimum of ten years of relevant intelligent traffic product manufacturing experience, as well as a minimum of three years of Solar-Powered Flashing Beacon manufacturing experience.

Functional and Hardware Requirements:

System:

- Each Pedestrian Crosswalk System shall consist of the following:
 - Flashing Beacon Warning Assemblies
 - Solar Powered Control Cabinets with Flash Controllers and Wireless Transceivers
 - 55W Solar Panels
 - 48Ah Batteries
 - Push Buttons
- Upon activation by pedestrian push button, the Flashing Beacon controllers shall activate all Flashing Beacons in the crosswalk system simultaneously. Flashing Beacons shall flash synchronously and then cease operation after a programmable timeout.

Control Cabinet:

- Shall be NEMA 3R Type
- Shall be 15.0" tall x 12.5" wide x 9.9" deep and constructed of minimum 0.080" thick aluminum.
- To promote airflow for internal components, the cabinet shall be vented with screening included on all vents and drains to prevent insects and other foreign matter from entering.
- For security, the cabinet must include at least two tamper-resistant stainless steel hinges and a replaceable #2 traffic lock with keys.
- To facilitate maintenance or repairs, the cabinet shall include a removable control panel to which all control circuit components either mount or connect.
- For easy installation on a wide range of pole sizes and types, the cabinet shall utilize four 5/16"-18 stainless steel mounting studs that mate to a range of bracket options. To ensure a secure mount to the supporting post, two banding style brackets that fit poles with a 2-3/8" or larger diameter shall be included as standard equipment. Mounting brackets also available for square pole, wooden post, and wall mount applications.
- To prevent corrosion, all materials used in the construction or mounting of the control cabinet shall be either aluminum or stainless steel. Anti-vandal mounting hardware shall be available as an option.

- A UV resistant label shall be applied to the exterior of the cabinet and include system specific information including model number, serial number, date of manufacture, as well as any applicable regulatory compliance information.

Flashing Beacon Controller:

The Flashing Beacon Programmable Flash Controller is housed within the NEMA 3R type Control Cabinet, and shall:

- Include integrated constant-current LED drivers with a minimum of two-channel output for driving one or two Flashing Beacon units.
- Flash the Flashing Beacon LEDs 50 to 60 flashes per minute.
- Have multiple programmable function options:
 - Run 24 hours per day, 7 days per week
 - Run from dusk to dawn
 - Run for a programmable time period when activated via switch, button contact closure or when triggered from an external sensor such as a wireless transmitter, radar, presence detector or loop detector with a compatible sensor output.
 - Run on a timeclock schedule that is programmed to the controller and determines days of the week and times of the day that the sign flashes.
- Provide multiple levels of Flashing Beacon LED brightness through LED drive current control
- If specified, automatically adjust the Flashing Beacon LED drive current control to optimize brightness for the ambient lighting conditions.
- Have the Flashing Beacon LED drive outputs reach the full output current as programmed within the duration of the 100ms on-time.
- Include an integrated Real Time Clock (RTC) with on-board battery backup.
- Have the capability of RS232 communication for programming with Windows-based software.
- Include a minimum of two General Purpose Inputs and Outputs (GPIO).
- Be internally housed in its own IP67 type enclosure.
- Be independently replaceable of other control panel components
- Be able to monitor internal temperature.
- Operate between the temperatures of -40° to +176°F (-40° to +80°C).

900 Mhz Wireless Transceiver:

- Shall operate wirelessly at 900 Mhz, utilizing Frequency Hopping Spread Spectrum (FHSS) technology to minimize the effects of external RF interference.
- Shall seamlessly integrate with the controller to ensure sequential activation of other radio-equipped devices in the system.
- Shall include an integrated LCD and two user-interface buttons for setup and troubleshooting, including readouts of flash duration (timeout), battery conditions, and LED testing functionality.
- Shall include two LED indicators for status and troubleshooting.
- Shall be capable of operating as a Parent (Gateway) or Child (Node or Repeater).

- Shall be capable of providing site-survey data for verification of signal strength between network devices.
- Shall include network-wide modification of sign controller settings and output durations, using programmability from any networked transceiver without the use of additional equipment or software.
- Shall synchronize the system components to activate the indications within 120msec of one other and remain synchronized throughout the duration of the flash (timeout) cycle.
- Shall operate on the license-free ISM band.
- Shall comply with part 15 of FCC rules.
- Shall operate from 3.3VDC to 15VDC.
- Shall be, in the unlikely event of failure, replaceable independently of other components.

Solar Charge Controller:

- Shall utilize an intelligent 4-stage algorithm and Pulse Width Modulation (PWM) for battery charging.
- Shall automatically provide Low Voltage Disconnect (LVD) to protect batteries when needed.
- Shall automatically provide Load-Reconnection once battery levels have been restored to an acceptable value.
- Shall protect against and automatically recover from: short circuit, overload, reverse polarity, high temperature, lightning and transient surge, as well as voltage spikes.
- Shall be independently replaceable of other control panel components.
- Shall operate from -40° to +140°F (-40° to +60°C).

Solar Panel, 55 Watt:

- Solar Panel shall be constructed of an anodized aluminum frame, high-transmission 1/8" tempered glass, with silicon cells encapsulated in double-layer EVA, and with a white polymer backing.
- The Solar Panel shall be affixed to a pole top bracket that allows an adjustable angle to provide maximum insolation exposure
- To ensure maximum solar insolation regardless of installation location, the post top mounting system shall provide 360° of rotational direction adjustment and upon installation, must be oriented with the collector facing South.
- The solar panel must be IEC61215, TUV, and UL 1703 certified. The solar panel shall operate at 12VDC nominal with a maximum output rating of 55 watts.
- The solar panel specifications:
 - Overall Size: 25.2" x 25.7"
 - Maximum power voltage: 18.18 VDC
 - Maximum power current: 3.1 A
 - Short circuit current: 3.31 A
 - Open circuit voltage: 22.1 VDC
 - Operate from -40° to +194°F (-40° to +90°C)
- All solar panel connectors shall conform to Ingress Protection, IP-67 rating, dust proof, and protected from temporary immersion in water up to 1 meter deep for 30 minutes. Connectors shall be Deutsch DTM series.

- All solar panel fasteners shall be anti-vandal pin-type set screws. Wrench shall be provided.

Battery, 48Ah:

- Shall be housed inside the Control Cabinet.
- Shall have a nominal output voltage of 12 VDC and a capacity of 48Ah.
- Shall be rechargeable type Gelled-Electrolyte.
- Shall be sealed and spill-proof.
- Battery shall be replaceable independently of other components.
- Shall be fused for short circuit protection.

Flashing Beacon Assembly:

- Each warning beacon assembly shall consist of:
 - A yellow polycarbonate vehicle traffic signal housing as required.
 - A black polycarbonate door.
 - A black poly visor.
 - A 12" Amber LED beacon module as required.
 - A yellow powder coated aluminum mounting arm, or, yellow poly carbonate mounting arm, depending on the application.
- The beacon assembly shall be provided from the manufacturer pre-assembled, requiring that only the visor be installed in the field.
- The signal housing shall be a one-piece unit with serrations in 5° increments at each end to allow for positive positioning during mounting and include provisions for attaching back plates if required.
- The housing, door and visor shall be injection molded of ultraviolet stabilized, pre-colored opaque polycarbonate.
- To prevent water entry, a neoprene gasket shall be included between the door and housing.
- A black cut visor shall be included as standard equipment, with other colors and styles available as options.
- The mounting arm shall consist of a pole connection hub plate with center hole for wire routing, a joint with serrations in 5° increments, and a bracket of at least 8" in length to allow for either vertical or horizontal orientation of the signal head.
- To prevent any marring of the finished surface when using aluminum, the arm assembly shall be assembled prior to powder coat application with all internal threads completely masked to prevent paint build-up.
- To prevent corrosion, all materials used in the construction and mounting of the beacon assembly shall be either polycarbonate, powder coated aluminum, or stainless steel.
- The LED beacon module shall provide incandescent-like appearance, be a fully sealed module featuring robust high flux LED technology, include abrasion resistant lens coating and easily install into existing signal enclosures if needed. The LED beacon module shall come pre-installed in the beacon assembly.
- The LED Beacon module shall at a minimum:
 - Utilize a LED Robust High Flux LED Technology.
 - Be driven directly from the constant current DC output of the programmable flash controller, or run from 12V output of the flash controller, as specified.

- Shall be configurable to be MUTCD compliant flash pattern Flashing Beacons (MUTCD: Manual on Uniform Traffic Control Devices).
- Include a yellow power wire and white ground wire quick connect spade terminals.
- Meet or exceed Military Standard 883, test method 2007 for vibration resistance.
- Meet or exceed Military Standard 810F, test method 506.4 for moisture resistance to rain and blowing rain.
- Have a dominant wavelength of 590nm (Amber) or 700nm (Red) as required.
- Operate from -40° to +165°F (-40° to +74°C).

Pedestrian Push Button:

- Shall operate as a normally open (n/o) circuit.
- Must be ADA Compliant.
- Shall operate from -30° to +165°F (-34° to +74°C)
- Shall be provided with all necessary mounting hardware, wiring and associated ADA signage.

Warning Static Signs:

- Each static sign face shall be constructed on a 0.080" thick 5052-H32 aluminum and screened onto Reflective sheeting of specified color conforming to the requirements specified in Section 1091 of the Standard Specifications.
- Shall have MUTCD compliant sign legend and size, as dictated by the requirements and as indicated in the plans.
- Shall have two holes for mounting to a post or pole.
- Includes pole mounting hardware.

Pole Package:

- Pole shall be a standard specified outer diameter aluminum pedestal pole.
- Pole shall be supplied with one end threaded for easy installation into a pedestal base.
- Pole shall be 13' - 15' length Schedule 40 pipe raw aluminum as required
- Pedestal Base shall be TP-358 cast aluminum that mounts on a concrete foundation attached by four internal anchor bolts imbedded in the foundation.
- Pedestal Base shall have a large 8.5" square hand hole cover allowing access to the interior.

Concrete Foundation:

This work shall be performed according to the standard details shown on the IDOT Highway Standard 878001-10 for CONCRETE FOUNDATION, TYPE A, and in the plans and the applicable sections of Section 878 of the Standard Specifications. Concrete foundations for the crosswalk system installation are considered incidental to the cost of SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE).

Warranty:

The Manufacturer shall offer a three-year unconditional warranty against all defects in material and workmanship.

Method of Measurement: SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE) will be measured per each crosswalk system installed and operational to the satisfaction and approval of the Engineer.

Basis of Payment: This item of work will be paid for at the contract unit price per each as shown in the Schedule of Unit Prices for SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE). The price will include full compensation for the construction of the solar-powered flashing LED beacon crosswalk system, and all equipment, materials, labor, tools, and incidentals necessary to complete the work.

DROP GATE

General: This work shall consist of all materials, tools, equipment, labor and accessories necessary to construct the double-hinged post drop gates as shown in the plans and specifications.

Materials: All materials shall meet the following specifications:

Bollard post: ASTM A500, two (2) 6" x 2" x ¼" steel tubes

Bollard base plate: ASTM A36, 12" x 12" base plate

Pins: 8-18 Stainless Steel - ¾" x 8" hinge pins, ¾" x 5" lock pin

Hardware: Hinge bolts, flat washers and hex nuts to anchor base plate to concrete base and to secure posts to base plate.

Finish: Primer: All surfaces are primed with rust & corrosion resistant, zinc rich primer w/ 5,000 hour salt spray performance.

Finish: Standard finish, TGIC Polyester outdoor finish RAL1028 Yellow. TGIC Polyester powder definition; meets decorative and functional requirements for gloss retention, physical properties, chemical resistance and weatherability.

Construction Requirements: Install per manufacturer's recommendations and at locations specified on the plans, except as modified herein or on the plans.

Bollard posts will collapse to a 3 inch clearance allowing vehicle traffic to pass.

Bollard posts come together in upright position to 30" height and locks with stainless steel lock pin & padlock.

Padlock to be provided by the Engineer as coordinated with the Forest Preserve District of Cook County.

Lock pins shall be drilled to accommodate 5/16" diameter lock shackle ("Forest Preserve Special").

Material Disposal: The contractor shall be responsible for hauling off and legally disposing of all excess gate material and waste generated from construction of these improvements off-site. Cost is included in the cost of the contract.

Submittals: The drop gates must be approved by the Engineer prior to installation. The Contractor shall submit manufacturer's literature, cut sheets, and shop drawings to the Engineer for review.

Method of Measure and Payment: This work will be measured and paid for at the contract unit price per each DROP GATE which shall be payment in full for all materials, equipment, tools, labor, and accessories necessary to complete this item of work. The concrete foundation will not be measured and paid for separately; rather it shall be included in the cost of the contract lump sum price for each DROP GATE.

FENCE REMOVAL

This item consists of the removal and disposal of existing fence at the locations shown in the plans in accordance with the applicable articles of Section 664 of the Standard Specifications. Such removals are required to create an opening in the fence for the purpose of installing the bike trail through the opening or to remove fence that has fallen into disrepair. Fence removal shall include the removal of posts and foundations in their entirety. All removed materials shall be disposed of by the Contractor, at his/her expense, outside the limits of the improvement. Holes or excavations resulting from the removal operation shall be backfilled with suitable material and compacted to the satisfaction of the Engineer.

All existing posts located within 3 feet of the proposed path edge shall be removed as well as at other locations shown on the plans. All fencing between the remaining posts nearest to the path shall be removed. New posts of the same material and dimensions as the existing shall be installed no closer than 3 feet from the edge of the proposed path. The new posts will then be utilized as end posts with the existing fencing attached to them appropriately.

At locations where fence fabric or rails shall remain, the Contractor shall cut the fabric or rails and connect it to new posts or existing posts to remain. In cutting the fence and re-connecting the fabric or rails to a new post, Contractor shall ensure that no cut ends of the fence will be exposed. Wire ties shall be used, if necessary to tie the fence to remain to the post that remains or the new post. No fence material shall extend beyond the posts which would create a hazard for path users. Connections between the existing fence, existing posts and new fence shall be made with the appropriate connections as approved by the Engineer.

FENCE REMOVAL shall be measured between new or existing posts that remain in place, and shall be paid for at the contract unit price per foot, measured as specified, which payment shall constitute full compensation for removing and disposing of all existing fence materials, including foundations; backfilling and compacting the resulting holes or excavations; connecting existing fence and posts that remain; and furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work as specified.

MONUMENT TYPE A FOUNDATION

This work shall consist of constructing the decorative sign post concrete foundation in accordance with the applicable sections of Section 502, Section 503, Section 508, and Section 521 of the Standards Specifications and according to the details shown on the plans.

Basis of Payment: This work will be paid for at the contract unit price per each MONUMENT TYPE A FOUNDATION completed and in place. The price will include full compensation for the construction of the concrete foundations (including structure excavation, concrete structures, reinforcement bars (epoxy coated), anchor bolts, etc.), and all equipment, materials, labor, tools, and incidentals necessary to complete the work.

DECORATIVE GATEWAY ELEMENT

This work shall consist of constructing the primary gateway concrete foundations, concrete columns, and form liner textured surface in accordance with the details shown on the plans and the applicable sections of Section 502, Section 503, Section 508, and Section 521 of the Standards Specifications. Also included in this work shall be the installation of the primary gateway's steel truss assembly and sign panel-logo according to the details shown on the plans. The steel truss assembly, attachment items and sign panel-logo are furnished under the Cal-Sag Greenway Trail Signage and Wayfinding contract to be installed under this contract. The Contractor shall reference previously constructed Decorative Gateway Elements and submit shop drawings to the Engineer for approval prior to performing the work.

Basis of Payment: This work will be paid for at the contract unit price per each DECORATIVE GATEWAY ELEMENT completed and in place. The price will include full compensation for the construction of the concrete foundations and columns (including structure excavation, concrete structures, form liner textured surface, reinforcement bars (epoxy coated), anchor bolts, etc.); installing and welding the steel truss assembly and sign panel-logo atop the concrete columns; and all equipment, materials, labor, tools, and incidentals necessary to complete the work.

DECORATIVE SIGN AND POST (DIRECT POST)

This work shall consist of the installation of decorative sign posts and base plates onto a new foundation. This work shall also consist of the attachment to the sign posts of sign panels, banner brackets, sign panel assemblies and all associated hardware according to the details shown on the plans. Decorative sign posts and associated items to be installed will be furnished under the Cal-Sag Greenway Trail Signage and Wayfinding contract.

Basis of Payment: This work will be paid for at the contract unit price per each DECORATIVE SIGN AND POST (DIRECT POST) completed and in place. The price will include full compensation for the installation of decorative sign post and signing assembly as described above atop a new concrete foundation, the connection of the sign post to the base plate, connection of sign panels and sign panel assemblies to the sign post, and all equipment, materials, labor, tools, and incidentals necessary to complete the work.

COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT

This work shall be performed according to the details shown on the plans and the applicable sections of Section 440 and Section 606 of the Standard Specifications.

All paved surfaces adjacent to the curbs and curb and gutters to be removed shall be saw cut to prevent damage to the pavement during removal operations. Any bituminous surface replacement needed to match existing grades shall be incidental to this item. A depressed curb and gutter shall be installed as shown on the details and shall conform to the dimensions of the existing curb and gutter.

Basis of Payment: This work shall be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT.

PORTLAND CEMENT CONCRETE SIDEWALK CURB

This work shall be performed according to the details shown on the highway standards, plans and the applicable sections of Section 424 and Section 606 of the Standard Specifications.

A barrier curb of variable height shall be installed on both sides of concrete curb ramps to the details and dimensions shown on the plans and the highways standards for CURB RAMPS FOR SIDEWALKS.

Basis of Payment: This work shall be paid for at the contract unit price per foot for PORTLAND CEMENT CONCRETE SIDEWALK CURB.

EMBANKMENT I

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. All material shall be approved by the District Geotechnical Engineer. The proposed material must meet the following requirements.

- a) The laboratory Standard Dry Density shall be a minimum of 90 lb/cu ft (1450 kg/cu m) when determined according to AASHTO T 99 (Method C).
- b) The organic content shall be less than ten percent determined according to AASHTO T 194 (Wet Combustion).
- c) Soils which demonstrate the following properties shall be restricted to the interior of the embankment and shall be covered on both the sides and top of the embankment by a minimum of 3 ft (900 mm) of soil not considered detrimental in terms of erosion potential or excess volume change.

- 1) A grain size distribution with less than 35 percent passing the number 75 um (#200) sieve.
 - 2) A plasticity index (PI) of less than 12.
 - 3) A liquid limit (LL) in excess of 50.
- d) Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.
- e) 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, tested, and approved 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 approval and compaction can be performed. Embankment material placement cannot begin until tests are completed and approval given.

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.

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 overlying 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.

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.

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

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

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

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.

HOT-MIX ASPHALT BINDER AND SURFACE COURSE (D-1)

Effective: November 1, 2019

Description. This work shall consist of constructing a hot-mix asphalt (HMA) binder and/or surface course on a prepared base. Work shall be according to Sections 406 and 1030 of the Standard Specifications, except as modified herein.

Materials. Revise Article 1004.03(c) to read:

" (c) Gradation. The coarse aggregate gradations shall be as listed in the following table.

| Use | Size/Application | Gradation No. |
|-----------------------|--|--|
| Class A-1, A-2, & A-3 | 3/8 in. (10 mm) Seal | CA 16 or CA 20 |
| Class A-1 | 1/2 in. (13 mm) Seal | CA 15 |
| Class A-2 & A-3 | Cover Coat | CA 14 |
| HMA High ESAL | IL-19.0; Stabilized Subbase IL-19.0 | CA 11 ^{1/} |
| | SMA 12.5 ^{2/} | CA 13 ^{4/} , CA 14, or CA 16 |
| | SMA 9.5 ^{2/} | CA 13 ^{3/4/} or CA 16 ^{3/} |
| | IL-9.5 | CA 16 |
| | IL-9.5FG | CA 16 |
| HMA Low ESAL | IL-19.0L | CA 11 ^{1/} |
| | IL-9.5L | CA 16 |

1/ CA 16 or CA 13 may be blended with the CA 11.

- 2/ The coarse aggregates used shall be capable of being combined with 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/ The specified coarse aggregate gradations may be blended.
- 4/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.”

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

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

HMA Nomenclature. Revise the “High ESAL” portion of the table in Article 1030.01 to read:

| | | |
|------------|-----------------|--|
| “High ESAL | Binder Courses | IL-19.0, IL-9.5, IL-9.5FG, IL-4.75, SMA 12.5, Stabilized Subbase IL-19.0 |
| | Surface Courses | IL-9.5, IL-9.5FG, SMA 12.5, SMA 9.5” |

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

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

| Article/Section | Item | |
|--|------|---------|
| (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 Department's Qualified Producer List, "Technologies for the Production of Warm Mix Asphalt (WMA)".

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

| High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/} | | | | | | | | | | |
|--|------------|-----|----------|-------------------|---------|-------------------|------------------|------------------|------------|-----------------|
| Sieve Size | IL-19.0 mm | | SMA 12.5 | | SMA 9.5 | | IL-9.5mm | | 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 ^{4/} | 16 | 32 ^{4/} | 34 ^{5/} | 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/} |
| #635 (20 μm) | | | ≤ 3.0 | | ≤ 3.0 | | | | | |
| 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/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.

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

| VOLUMETRIC REQUIREMENTS High ESAL | | | | |
|--------------------------------------|---|--------|-----------------------|---|
| | Voids in the Mineral Aggregate (VMA), % minimum | | | Voids Filled with Asphalt Binder (VFA), % |
| Ndesign | IL-19.0; Stabilized Subbase 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.”

Revise the table in Article 1030.04(b)(3) to read:

| “VOLUMETRIC REQUIREMENTS, SMA 12.5 ^{1/} and SMA 9.5 ^{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/} | 75 - 83 |
| | | 16.0 ^{3/} | |

- 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.”

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

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

Quality Control/Quality Assurance (QC/QA). Revise the third paragraph of Article 1030.05(d)(3) to read:

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

Add the following paragraphs to the end of Article 1030.05(d)(3):

“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.

When a longitudinal joint sealant (LJS) is applied, longitudinal joint density testing will not be required on the joint(s) sealed.”

Revise the second table in Article 1030.05(d)(4) and its notes to read:

| “DENSITY CONTROL LIMITS | | | |
|-------------------------|-------------------|---|--|
| 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-9.5FG | Ndesign = 50 - 90 | 93.0 – 97.4 % | 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 = 80 | 93.5 – 97.4 % | 91.0% |

1/ Density shall be determined by cores or by correlated, approved thin lift nuclear gauge.

2/ 92.0 % when placed as first lift on an unimproved subgrade.”

Equipment. Add the following to Article 1101.01 of the Standard Specifications:

“(h) Oscillatory Roller. The oscillatory roller shall be self-propelled and provide a smooth operation when starting, stopping, or reversing directions. The oscillatory roller shall be able to operate in a mode that will provide tangential impact force with or without vertical impact force by using at least one drum. The oscillatory roller shall be equipped with water tanks and sprinkling devices, or other approved methods, which shall be used to wet the drums to prevent material pickup. The drum(s) amplitude and frequency of the tangential and vertical impact force shall be approximately the same in each direction and meet the following requirements:

- (1) The minimum diameter of the drum(s) shall be 42 in. (1070 mm);
- (2) The minimum length of the drum(s) shall be 57 in. (1480 mm);
- (3) The minimum unit static force on the drum(s) shall be 125 lb/in. (22 N/m); and
- (4) The minimum force on the oscillatory drum shall be 18,000 lb (80 kN).”

Construction Requirements.

Add the following to Article 406.03 of the Standard Specifications:

“(j) Oscillatory Roller 1101.01”

Revise the third paragraph of Article 406.05(a) to read:

“All depressions of 1 in. (25 mm) or more in the surface of the existing pavement shall be filled with binder. At locations where heavy disintegration and deep spalling exists, the area shall be cleaned of all loose and unsound material, tacked, and filled with binder (hand method).”

Revise Article 406.05(c) to read.

“(c) Binder (Hand Method). Binder placed other than with a finishing machine will be designated as binder (hand method) and shall be compacted with a roller to the satisfaction of the Engineer. Hand tamping will be permitted when approved by the Engineer.”

Revise the special conditions for mixture IL-4.75 in Article 406.06(b)(2)e. to read:

“e. The mixture shall be overlaid within 5 days of being placed.”

Revise Article 406.06(d) to read:

“(d) Lift Thickness. The minimum compacted lift thickness for HMA binder and surface courses shall be as follows.

| MINIMUM COMPACTED LIFT THICKNESS | |
|----------------------------------|--|
| Mixture Composition | Thickness, in. (mm) |
| IL-4.75 | 3/4 (19) - over HMA surfaces ^{1/} 1 (25) - over PCC surfaces ^{1/} |
| IL-9.5FG | 1 1/4 (32) |
| IL-9.5, IL-9.5L | 1 1/2 (38) |
| SMA 9.5 | 1 3/4 (45) |
| SMA 12.5 | 2 (51) |
| IL-19.0, IL-19.0L | 2 1/4 (57) |

1/ The maximum compacted lift thickness for mixture IL-4.75 shall be 1 1/4 in. (32 mm).”

Revise Table 1 and Note 3/ of Table 1 in Article 406.07(a) of the Standard Specifications to read:

| |
|--|
| “TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA |
|--|

| | Breakdown Roller (one of the following) | Intermediate Roller | Final Roller (one or more of the following) | Density Requirement |
|----------------------------------|--|---|---|--|
| Binder and Surface ^{1/} | V _D , P ^{3/} , T _B , 3W, O _T , O _B | P ^{3/} , O _T , O _B | V _S , T _B , T _F , O _T | As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7). |
| IL-4.75 and SMA ^{4/ 5/} | T _B , 3W, O _T | - - | T _F , 3W, O _T | |
| Bridge Decks ^{2/} | T _B | - - | T _F | As specified in Articles 582.05 and 582.06. |

3/ A vibratory roller (V_D) or oscillatory roller (O_T or O_B) may be used in lieu of the pneumatic-tired roller on mixtures containing polymer modified asphalt binder.”

Add the following to EQUIPMENT DEFINITION in Article 406.07(a) contained in the Errata of the Supplemental Specifications:

“O_T - Oscillatory roller, tangential impact mode. Maximum speed is 3.0 mph (4.8 km/h) or 264 ft/min (80 m/min).

O_B - Oscillatory roller, tangential and vertical impact mode, operated at a speed to produce not less than 10 vertical impacts/ft (30 impacts/m).”

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).

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 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 second through the fifth paragraphs of Article 406.14 with the following:

“HMA binder and surface courses will be paid for at the contract unit price per ton (metric ton) for MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS; HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the Ndesign specified; HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and Ndesign specified; HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE (HAND METHOD), of the Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, of the mixture composition and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, of the mixture composition, friction aggregate, and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified; POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition, friction aggregate, and Ndesign specified.”

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

Effective: November 1, 2012

Revise: November 1, 2019

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 mixture composition of the mix design.

(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 | |
|--------------------------|--------------------------------|------|
| | FRAP | RAS |
| % Passing: ^{1/} | | |
| 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 listed below for a given N Design.

Maximum Asphalt Binder Replacement (ABR) for FRAP with RAS Combination

| HMA Mixtures <i>1/ 2/ 4/</i> | Maximum % ABR | | | |
|---------------------------------|---------------|----------------------|-----------------------|--------------------------------|
| | Ndesign | Binder ^{5/} | Surface ^{5/} | Polymer Modified ^{3/} |
| 30L | | 50 | 40 | 30 |
| 50 | | 40 | 35 | 30 |
| 70 | | 40 | 30 | 30 |
| 90 | | 40 | 30 | 30 |
| SMA | | | | 30 |
| IL-4.75 | | | | 40 |

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 %.

5/ When the mix has Illinois Flexibility Index Test (I-FIT) requirements, the maximum percent asphalt binder replacement designated on the table may be increased by 5%.

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing 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}) of 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.

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 and agglomerated 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) FRAP. The coarse aggregate in all FRAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.
- (b) 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.
- (c) 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).
 - e. RAS and FRAP weight to the nearest pound (kilogram).
 - f. Virgin asphalt binder weight to the nearest pound (kilogram).
 - g. 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 in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except “Non-Quality” and “FRAP”. The testing requirements of Article 1031.03 shall not apply. RAP used shall be according to the current Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.
- (b) Gradation. The RAP material shall meet the gradation requirements for CA 6 according to Article 1004.01(c), except the requirements for the minus No. 200 (75 µm) sieve shall not apply. The sample for the RAP material shall be air dried to constant weight prior to being tested for gradation.”

FRICTION AGGREGATE (D-1)

Effective: January 1, 2011

Revised: April 29, 2016

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

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

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

| Use | Mixture | Aggregates Allowed |
|-----------------|---------------------------------------|--|
| Class A | Seal or Cover | <u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete |
| HMA Low ESAL | Stabilized Subbase or Shoulders | <u>Allowed Alone or in Combination</u> ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete |

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

| Use | Mixture | Aggregates Allowed | |
|--|--|--|--|
| HMA High ESAL | E Surface IL-9.5 SMA Ndesign 80 Surface | <u>Allowed Alone or in Combination</u> ^{5/ 6/} : | |
| | | Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone. | |
| | | <u>Other Combinations Allowed:</u> | |
| | | <i>Up to...</i> | <i>With...</i> |
| | | 50% Dolomite ^{2/} | Any Mixture E aggregate |
| 75% Dolomite ^{2/} | Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone | | |
| 75% Crushed Gravel ^{2/} or Crushed Concrete ^{3/} | Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag | | |
| HMA High ESAL | F Surface IL-9.5 SMA Ndesign 80 Surface | <u>Allowed Alone or in Combination</u> ^{5/ 6/} : | |
| | | Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone. | |
| | | <u>Other Combinations Allowed:</u> | |
| | | <i>Up to...</i> | <i>With...</i> |
| | | 50% Crushed Gravel ^{2/} , 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.”

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.

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:

| | <u>Item</u> | <u>Article/Section</u> |
|-----|-------------------------|-------------------------------|
| a.) | Sign Base (Notes 1 & 2) | 1090 |
| b.) | Sign Face (Note 3) | 1091 |
| c.) | Sign Legends | 1092 |
| d.) | Sign Supports | 1093 |
| e.) | Overlay Panels (Note 4) | 1090.02 |

- Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.
- Note 2. Type A sheeting can be used on the plywood base.
- Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.
- Note 4. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIREMENTS

Installation.

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

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

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

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

Method of Measurement.

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

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

Basis Of Payment.

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

PUBLIC CONVIENENCE AND SAFETY (DIST 1)

Effective: May 1, 2012

Revised: July 15, 2012

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

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

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

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

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

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

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

City of Blue Island

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



Storm Water Pollution Prevention Plan

Route Cal-Sag Trail - Blue Island West Marked Rte. N/A
 Section 08-00178-03-BT Project No. 9JTD(912)
 County Cook Contract No. 61F17

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

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

Mark Miller
 Print Name
Project Coordinator
 Title
City of Blue Island
 Agency

Mark Miller
 Signature
5/7/19
 Date

Note: Guidance on preparing each section of BDE 2342 can be found in Chapter 41 of the IDOT Bureau of Design and Environment Manual. Chapter 41 and this form also reference the IDOT Drainage Manual which should be readily available.

I. Site Description:

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

The bike trail project is located within the limits of the City of Blue Island, Cook County. The project starts on 131st Street just west of Francisco Avenue and heads easterly on 131st Street to Francisco Avenue. From Francisco Street on Vermont Street, the project continues east to Chatham Street and south to Canal Street. At Canal Street the project heads east along the south side of the Cal-Sag Channel terminating at Ashland Avenue. Latitude: 41.652323, Longitude: -87.669088, Section 31, Township 37N, Range 14E)

B. Provide a description of the construction activity which is the subject of this plan. Include the number of construction stages, drainage improvements, in-stream work, installation, maintenance, removal of erosion measures, and permanent stabilization:

The single construction stage work consists of a 10 foot wide asphalt bike trail, grass shoulders, pavement markings, drainage improvements, pipe culverts with end sections, grading, seeding, signing, pavement marking, erosion control, tree removal, traffic control, along with all incidental and collateral work necessary to complete the project.

C. Provide the estimated duration of this project:

35 working days

D. The total area of the construction site is estimated to be 3.0 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 3.0 acres.

E. The following are weighted averages of the runoff coefficient for this project before and after construction activities are completed (See Section 4-102 of the IDOT Drainage Manual):

The weighted average runoff coefficient for the project site before construction is 0.45.
 The weighted average runoff coefficient for the project site after construction is 0.57.

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

Map Unit 533 Urban Land (% slopes N/A), No K value
Map Unit 802B Orthents, loamy, undulating (1 to 6% slopes), K =0.37
Map Unit 802D orthents, loamy, rolling (6 to 12% slopes), K=0.37

G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site (See Phase I report):
0 Acres. No Wetlands within the project limits.

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

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

The Contractor will first clear the trees and undergrowth within the work limits as shown on the plans. Once the area has been cleared, perimeter erosion fencing will be installed at the outside limits of the work area. Excavation and filling of the ground will then take place to the proposed grade of the trail. As part of the earthwork, cross trail culverts will be installed and ditches will be constructed parallel to the trail. Ditch checks and inlet protection will be installed at the locations shown on the plans immediately upon installation of this work.

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

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

The drainage system for this project is owned by the City of Blue Island and MWRD.

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

City of Blue Island

M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. In addition, include receiving waters that are listed as Biologically Significant Streams by the IDNR. The location of the receiving waters can be found on the erosion and sediment control plans:

Calumet Sag Channel

N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes (i.e., 1:3 or steeper), highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc. Include any commitments or requirements to protect adjacent wetlands.

For any storm water discharges from construction activities within 50-feet of Waters of the US (except for activities for water-dependent structures authorized by a Section 404 permit, describe: a) How a 50-foot undisturbed natural buffer will be provided between the construction activity and the Waters of the United States, or b) How additional erosion and sediment controls will be provided within that area.

Work will be limited only to the width necessary to construct the work associated with the proposed trail. Perimeter erosion fencing will be installed to limit intrusion beyond the required work area. Temporary fence for tree trunk protection will be provided for trees to remain. Temporary and permanent ditch checks will be provided to steep longitudinal ditch grades. Riprap on top of filter fabric will be provided at the downstream end of trail cross culverts.

O. Per the Phase I document, the following sensitive environmental resources are associated with this project and may have the potential to be impacted by the proposed development. Further guidance on these resources is available in Section 41-4 of the BDE Manual.

303(d) Listed receiving waters for suspended solids, turbidity, or siltation

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

Calumet Sag Channel, Pollutants: Mercury, Polychlorinated biphenyls, Iron, Oxgen (Dissolved), Phosphorus (Total), & Total Suspended Solids (TSS)

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

To prevent the 25 year storm event Perimeter Erosion Barrier set at the low side of the limits of construction to trap sediment will be provided. Temporary erosion control seeding (or Mulch Method 2) and erosion control blankets will be applied to the construction area to prevent soils from eroding.

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

A drainage ditch or swale is provide on the high side of the trail to intercept sheet flow. Along the new ditch line are pipe culverts set at low points to outlet (direct discharge) the collected sheet flow underneath the trail towards the Cal-Sag Channel. Riprap on top of filter fabric will be provided at the downstream end of each pipe culvert.

Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:
Dewatering discharges are not anticipated for the construction of this project.

- Applicable Federal, Tribal, State or Local Programs
- Floodplain
- Historic Preservation
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation

TMDL (fill out this section if checked above)

The name(s) of the listed water body:

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

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

- Threatened and Endangered Species/Illinois Natural Areas (INA)/Nature Preserves
- Other
- Wetland

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

- | | |
|---|---|
| <input type="checkbox"/> Antifreeze / Coolants | <input type="checkbox"/> Solid Waste Debris |
| <input checked="" type="checkbox"/> Concrete | <input type="checkbox"/> Solvents |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Soil Sediment | <input type="checkbox"/> Other (specify) |

II. Controls:

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

A. **Erosion and Sediment Controls:** At a minimum, controls must be coordinated, installed and maintained to:

1. Minimize the amount of soil exposed during construction activity;

2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

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

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

The following stabilization practices will be used for this project:

- | | | | |
|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> | Erosion Control Blanket / Mulching | <input type="checkbox"/> | Temporary Turf (Seeding, Class 7) |
| <input type="checkbox"/> | Geotextiles | <input type="checkbox"/> | Temporary Mulching |
| <input checked="" type="checkbox"/> | Permanent Seeding | <input type="checkbox"/> | Vegetated Buffer Strips |
| <input checked="" type="checkbox"/> | Preservation of Mature Vegetation | <input checked="" type="checkbox"/> | Other (specify) Mulch, Method 2 |
| <input checked="" type="checkbox"/> | Protection of Trees | <input type="checkbox"/> | Other (specify) |
| <input checked="" type="checkbox"/> | Sodding | <input type="checkbox"/> | Other (specify) |
| <input checked="" type="checkbox"/> | Temporary Erosion Control Seeding | <input type="checkbox"/> | Other (specify) |

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

All sediment and erosion control measures will be installed per IDOT standard Section 280 as specified in the IDOT Standard Specifications, Adopted April 1, 2016.

Where possible, stabilization of the initial Stage should be completed before work is moved to the subsequent stages.

Stabilization controls runoff volume and velocity, peak runoff rates and volumes of discharge to minimize exposed soil, disturbed slopes, sediment discharges from construction, and provides for natural buffers and minimization of soil compaction. Existing vegetated areas where disturbance can be avoided will not require stabilization.

Sediment and erosion control devices will be functional before the project site is disturbed. All disturbed areas will be seeded as soon as practical after construction activities in that area have concluded. Temporary erosion control measures consist of perimeter erosion barriers, temporary seeding, mulch method 2 and erosion control blanket. Perimeter erosion barrier will be placed at the limits of construction or as noted on the plans. Mulch Method 2 will be applied to slopes for temporary stabilization prior to seasons when Temporary Seed will not germinate, for example mid-July and winter. Erosion control blanket will be placed from the proposed pavement edges to the limits of construction. Permanent seeding Class 1B shall be placed along the shoulders after completion of the final grading and topsoil placement and Class 4A (modified) shall be used along the foreslopes, ditch locations, and backslopes. All control measures will be kept operational and maintained continuously throughout the period of land disturbance until permanent sediment and erosion control measures are operational. Earth stockpiles shall be temporarily seeded if they are to remain unused for more than fourteen days.

The Contractor shall remove only those trees and shrubs so designated by the Engineer, or those which directly interfere with the safety or quality of construction practices. The Contractor shall exercise extreme care when working near existing trees and shrubs to avoid damaging those not scheduled for removal, and shall replace any damaged plants at his own expense.

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

Each permanent stabilization practice utilized in the ESC Plan and/or Landscape Plan should be checked above.

Additionally, a description of how the practice will be implemented should also be included. Things to consider: Where possible, permanent stabilization of the initial Stage should be completed before work is moved to the subsequent stages.

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

The following structural practices will be used for this project:

- | | | | |
|-------------------------------------|------------------------------|-------------------------------------|-------------------------------|
| <input checked="" type="checkbox"/> | Aggregate Ditch | <input type="checkbox"/> | Stabilized Construction Exits |
| <input type="checkbox"/> | Concrete Revetment Mats | <input type="checkbox"/> | Stabilized Trench Flow |
| <input type="checkbox"/> | Dust Suppression | <input type="checkbox"/> | Slope Mattress |
| <input type="checkbox"/> | Dewatering Filtering | <input type="checkbox"/> | Slope Walls |
| <input type="checkbox"/> | Gabions | <input checked="" type="checkbox"/> | Temporary Ditch Check |
| <input type="checkbox"/> | In-Stream or Wetland Work | <input type="checkbox"/> | Temporary Pipe Slope Drain |
| <input type="checkbox"/> | Level Spreaders | <input type="checkbox"/> | Temporary Sediment Basin |
| <input type="checkbox"/> | Paved Ditch | <input type="checkbox"/> | Temporary Stream Crossing |
| <input type="checkbox"/> | Permanent Check Dams | <input type="checkbox"/> | Turf Reinforcement Mats |
| <input checked="" type="checkbox"/> | Perimeter Erosion Barrier | <input type="checkbox"/> | Other (specify) |
| <input type="checkbox"/> | Permanent Sediment Basin | <input type="checkbox"/> | Other (specify) |
| <input type="checkbox"/> | Retaining Walls | <input type="checkbox"/> | Other (specify) |
| <input checked="" type="checkbox"/> | Riprap | <input type="checkbox"/> | Other (specify) |
| <input type="checkbox"/> | Rock Outlet Protection | <input type="checkbox"/> | Other (specify) |
| <input type="checkbox"/> | Sediment Trap | <input type="checkbox"/> | Other (specify) |
| <input type="checkbox"/> | Storm Drain Inlet Protection | <input type="checkbox"/> | Other (specify) |

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

Temporary Perimeter Erosion Barrier will be placed at all locations where runoff exits and enters the project site in an effort to prevent or control the erosion and sedimentation from leaving the project site. Temporary and Permanent Aggregate Ditch checks will be used along the proposed ditches to minimize the concentration of ditch flow. Riprap will be placed at outlet ends of pipe culverts to minimize the concentration of flow exiting the pipes.

Silt fence should not be utilized in areas of concentrated flow. Alternative ESC practices such as ditch checks should be utilized in locations of concentrated flows. Silt fence should only be used as PEB in areas where the work area is higher than the perimeter. The use of silt fence at the top of the slope/elevations higher than the work area should always be avoided. Temporary fence should be utilized in these locations (where the top of slope/elevation is higher than the work area) in place of silt fence."

Avoid using the INLET AND PIPE PROTECTION shown on the Highway Standard Sheets 280001. Straw bales and silt fence should not be used as inlet and pipe protection. Inlet and pipe protection should be comprised of ditch checks, temporary seeding and temporary erosion control blanket and will be installed at all storm sewer and culverts. Inlet filters, as specified in Article 1081.15(h) of the Standard Specifications (current edition) will be installed at all inlets, catch basins, and manholes for the duration of construction. Inlet filters will be cleaned on a regular basis. Ensure proper quantities of inlet filters. filter fabric, ditch checks, temporary seeding and temporary erosion control blanket are included in the contract.

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

Aggregate ditch checks will be provided along ditches. Riprap will remain in at the outlet ends of pipe culverts. Filter fabric will remain in place at the inlet and outlets of all cross trail culverts.

D. Treatment Chemicals

Will polymer flocculants or treatment chemicals be utilized on this project: Yes No

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

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

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

The practices selected for implementation were determined based on the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design and Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

Since the project consists of a multi-use recreational bike trail, no pollutants will be present as a result of the use of the trail.

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

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

All management practices, controls, and other provisions provided in this project are in accordance with IDOT Standard Specifications for Road and Bridge Construction adopted April 1, 2016, and the project special provisions.

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

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
 - Approximate duration of the project, including each stage of the project
 - Rainy season, dry season, and winter shutdown dates
 - Temporary stabilization measures to be employed by contract phases
 - Mobilization timeframe
 - Mass clearing and grubbing/roadside clearing dates

- Deployment of Erosion Control Practices
 - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
 - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
 - Paving, saw-cutting, and any other pavement related operations
 - Major planned stockpiling operations
 - Timeframe for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
 - Permanent stabilization activities for each area of the project
2. During the pre-construction meeting, the Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
- Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
 - Vehicle Entrances and Exits – Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
 - Material Delivery, Storage and Use – Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
 - Stockpile Management – Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
 - Waste Disposal – Discuss methods of waste disposal that will be used for this project.
 - Spill Prevention and Control – Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
 - Concrete Residuals and Washout Wastes – Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
 - Litter Management – Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
 - Vehicle and Equipment Fueling – Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
 - Vehicle and Equipment Cleaning and Maintenance – Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
 - Dewatering Activities – Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
 - Polymer Flocculants and Treatment Chemicals – Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
 - Additional measures indicated in the plan.

III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Describe how all items will be checked for structural integrity, sediment accumulation and functionality. Any damage or undermining shall be repaired immediately. Provide specifics on how repairs will be made. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

All ESC measures will be maintained in accordance with the IDOT Erosion and Sediment Control Field Guide for Construction Inspection and IDOT's Best Management Practices – Maintenance Guide:

<http://www.idot.illinois.gov/transportation-system/environment/erosion-and-sediment-control>.

All maintenance of ESC systems is the responsibility of the contractor. The Contractor shall check all ESC measures weekly and after each rainfall, 0.5 inches or greater in a 24 hour period, or equivalent snowfall. Additionally, during winter months, all measures should be checked by the Contractor after each significant snow melt.

All ESC measures that will be inspected such as Perimeter Erosion Barrier, Inlet and Pipe Protection, Filter Fabric, Riprap, Erosion Control Blanket/Temporary Mulching, Permanent Seeding, Temporary Seeding, Temporary Ditch Checks, Stabilized Construction Entrance, etc.

Soil erosion and sediment control features shall be constructed prior to the commencement of upland disturbance.

Temporary soil stabilization shall be applied to disturbed areas within 14 calendar days of the end of active hydrologic disturbance. Permanent stabilization shall be done within 14 days after completion of final grading of the soil.

All temporary erosion and sediment control measures shall be removed within 30 days after final stabilization is achieved or after the temporary measures are no longer needed. Trapped sediment and other disturbed soil areas shall be permanently stabilized.

All temporary and permanent erosion control measures must be maintained and repaired as needed. The Contractor will be responsible for inspection and repair during construction.

The erosion control measures shown on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or governing agency.

The Contractor shall install all erosion control prior to the start of the earth work.

If a stockpile is to remain in place for more than three days, erosion control measures shall be provided.

Perimeter Erosion Barriers will be routinely cleaned of debris and any worn or inefficient segments will be replaced throughout the project duration.

IV. Inspections:

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

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

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

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

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

V. Failure to Comply:

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



Contractor Certification Statement

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

| | | | |
|---------|---|--------------|------------------|
| Route | <u>Cal-Sag Trail - Blue Island West</u> | Marked Rte. | <u>N/A</u> |
| Section | <u>08-00178-03-BT</u> | Project No. | <u>9JTD(912)</u> |
| County | <u>Cook</u> | Contract No. | <u>61F17</u> |

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

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

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

- Contractor
- Sub-Contractor

| | |
|-------------------------|-------------------------|
| <hr/> Print Name | <hr/> Signature |
| <hr/> Title | <hr/> Date |
| <hr/> Name of Firm | <hr/> Telephone |
| <hr/> Street Address | <hr/> City/State/ZIP |

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



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-2829

217/782-0610

7/17/2019

City of Blue Island
Mark Miller
13051 Greenwood Avenue
Blue Island, IL 60406

RE: FACILITY : Cal-Sag Trail (Blue Island West), Blue Island, IL
COUNTY : COOK, NPDES Permit No : ILR10AW94
Notice of Coverage Under Construction Site Activity Storm Water General Permit

Dear NPDES Permittee:

We have reviewed your application and determined that storm water discharges associated with industrial activity from construction sites are appropriately covered by the attached General NPDES Permit issued by the Agency. Your discharge is covered by this permit effective as of the date of this letter or as identified by the conditions of the permit. The Permit as issued covers application requirements, a storm water pollution prevention plan and reporting requirements.

As a Permit Holder, it is your responsibility to:

1. Submit a modified Notice of Intent of any **ownership or address change** to the Permit Section within 30 days;
2. **A Notice of Termination** must be sent to the Agency, at the address indicated on the Notice of Termination, once your construction project has been **completed and the site is properly stabilized**. A Notice of Termination form has been enclosed for your convenience;

This letter shows your facility permit number below the construction site name. Please save this number and reference it in all future correspondence. Should you have any questions concerning the Permit, please contact Melissa Parrott at (217) 782-0610.

Very truly yours,

Amy L. Dragovich, P.E.
Manager, Permit Section
Division of Water Pollution Control

CC : **Records Unit**, North Cook County SWCD, Will - South Cook County SWCD, Region : DesPlaines

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5600
2009 Mall St., Collinsville, IL 62234 (618)346-5120

9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
5407 N. University St., Arbor 115, Peoria, IL 61614 (309)693-5462
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 11-300, Chicago, IL 60601 (312)814-6026

PLEASE PRINT ON RECYCLED PAPER



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Source Site Certification by Owner or Operator for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-662

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 source site owners and operators to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1) (A), that soil (i) was removed from a site that is not potentially impacted property and is presumed to be uncontaminated soil and (ii) is within a pH range of 6.25 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 fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Cal-Sag Trail - Blue Island West Office Phone Number, if available: _____

Physical Site Location (Street, Road): Along the south side of the Calumet-Sag Channel from Chatham St to Ashland Avenue

City: Blue Island State: IL Zip Code: 60406 County: Cook

Township: Calumet

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

Latitude: 41.65232 Longitude: - 87.66909

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS Map Interpolation Photo Interpolation Survey Other

Illinois State Geological Survey - Public Land Survey System

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

Approximate Start Date (mm/dd/yyyy): Mar 2, 2020 Approximate End Date (mm/dd/yyyy): May 1, 2020

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

II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: _____ City of Blue Island

Name: _____

Street Address: _____ 13051 Greenwood Avenue

Street Address: _____

PO Box: _____

PO Box: _____

City: _____ Blue Island State: _____ IL

City: _____ State: _____

Zip Code: _____ 60406 Phone: _____ 708-396-7143

Zip Code: _____ Phone: _____

Contact: _____ Mark Miller

Contact: _____

Email, if available: _____ mmiller@cityofblueisland.org

Email, if available: _____

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

Source Site Certification

III. Descriptions of Current and Past Uses of Source Site

Describe the current and past uses of the site and nearby properties.* Attach additional information as needed. The description must take into account, at a minimum, the following for the source site and for nearby property: (1) use of the properties for commercial or industrial purposes; (2) the use, storage or disposal of chemical or petroleum products in individual containers greater than 5 gallons or collectively more than 50 gallons; (3) the current or past presence of any storage tanks (above ground or underground); (4) any waste storage, treatment or disposal at the properties; (5) any reported releases or any environmental cleanup or removal of contaminants; (6) any environmental liens or governmental notification of environmental violations; (7) any contamination in a well that exceeds the Board's groundwater quality standards; (8) the use, storage, or disposal of transformers or capacitors manufactured before 1979; and (9) any fill dirt brought to the properties from an unknown source or site.

Number of pages attached: 0

The site is occupied by vacant land currently and in the past. The vacant land is owned by MWRD and leased to the City of Blue Island (end of lease May 31, 2052). The site is designated as parks/recreational and is mostly densely forested and vegetated with areas of open grassland. The nearby properties are residential homes to the south and the Calumet Sag Channel to the north. See site aerial map (Cal-Sag Trail pH Sample Locations Blue Island) included in the attachments provided under IV. Soil pH Testing Results.

*The description must be sufficient to demonstrate that the source site is not potentially impacted property, thereby allowing the source site owner or operator to provide this certification.

IV. Soil pH Testing Results

Describe the results of soil pH testing showing that the soil pH is within the range of 6.25 to 9.0 and attach any supporting documentation.

Number of pages attached: 12

Five (5) samples were collected and test from the project site. See attached for supporting documentation Sample CAL-BI-01: pH 7.67, Sample CAL-BI-02: pH 7.83, Sample CAL-BI-03: pH 8.15, Sample CAL-BI-04: pH 7.68, and Sample CAL-BI-05: pH 7.52 .

The above results are within the acceptable pH range. Soils from the project site are approved for disposal off-site.

V. Source Site Owner, Operator or Authorized Representative's Certification Statement and Signature

In accordance with the Illinois Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I Mark Miller (owner, operator or authorized representative of source site) certify that this site is not a potentially impacted property and the soil is presumed to be uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. I further certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. Additionally, I certify that I am either the site owner or operator or a duly authorized representative of the site owner or site operator and am authorized to sign this form. Furthermore, I certify that all 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.

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

- Owner
- Operator

- Owner's Duly Authorized Representative
- Operator's Duly Authorized Representative

Mark Miller
Printed Name

7/30/19
Date

Mark Miller
Signature

May 31, 2017

Brian Czosnyka
Project Manager, Transportation, AECOM
303 East Wacker Drive
Suite 1400
Chicago, IL 60601**Subject: pH Sample Results, Cal-Sag Trail East, Blue Island, IL
AECOM Project No. 60428658**

Dear Brian,

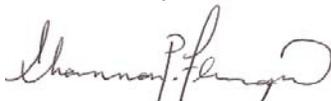
AECOM Technical Services, Inc. (AECOM) collected five (5) soil samples on May 16, 2017, prior to excavation work planned for the Cal-Sag Trail (East) extension, along the south bank of the Calumet Sag Channel between Chatham Street and Interstate 57 in Blue Island, Illinois (**Figure 1**). Soil sampling was performed to fulfill the soil pH testing requirement of the Source Site Certification Form (LPC-662). Soil pH in all samples was within the acceptable range (6.25 – 9.00 pH units).

Soil samples were collected from approximately equally spaced locations along the length of the proposed project alignment, and within the area to be excavated prior to trail construction. Each soil sample was collected as a discrete, grab sample, and was obtained from a depth between 0 and 1.0 foot (ft) below ground surface (bgs) (maximum proposed excavation depth for trail construction), using a hand auger. The five (5) soil samples were collected in laboratory-provided glassware, field preserved in accordance with United States Environmental Protection Agency (USEPA) sampling guidance and standard industry practices, and submitted under chain-of-custody control to STAT Analysis Laboratories, Inc. of Chicago, Illinois, an independent analytical laboratory, and analyzed for soil pH using U.S. EPA Method 9045C.

Soil sample locations are shown on the attached **Figure 1**. All samples were analyzed for soil pH for comparison to the Maximum Allowable Concentrations (MACs - 35 IAC 1100) that help determine whether soil or fill is eligible for disposal at a Clean Construction and Demolition Debris (CCDD) facility. The soil sample analytical results are summarized in **Table 1**. The laboratory analytical report is provided in **Attachment 1**. All soil samples were within the acceptable pH range of 6.25 to 9.00 pH units.

Please contact us if you have any questions or need additional information.

Yours sincerely,


Shannon P. Flanagan, P.E.
Project Engineer
Shannon.flanagan@aecom.com

Matt Kyrias
Geologist
matt.kyrias@aecom.com

Attachments

| | |
|--------------|--|
| Table 1 | Summary of Soil Analytical Results – Soil pH |
| Figure 1 | pH Sample Locations |
| Attachment A | Laboratory Analytical Reports |

cc: Ken Moy (AECOM)

To enhance and sustain the world's built, natural and social environments

Table

Table 1
Summary of Soil Analytical Results - Soil pH (pH units)

BLUE ISLAND
Cal-Sag East Trail

| | | | | | |
|------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Sample ID | CAL-BI-01 (0-1) | CAL-BI-02 (0-1) | CAL-BI-03 (0-1) | CAL-BI-04 (0-1) | CAL-BI-05 (0-1) |
| Lab ID | 17050568-001A | 17050568-002A | 17050568-003A | 17050568-004A | 17050568-005A |
| Collection Date | 5/16/2017 | 5/16/2017 | 5/16/2017 | 5/16/2017 | 5/16/2017 |
| Collection time | 9:30:00 | 9:45:00 | 9:50:00 | 10:35:00 | 10:45:00 |
| pH Result | 7.67 | 7.83 | 8.15 | 7.68 | 7.52 |

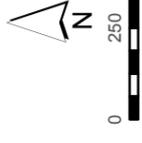
Sample results for pH were within the pH range of 6.25 to 9.0.

Figure

To enhance and sustain the world's built, natural and social environments

**Cal-Sag Trail
pH Sample Locations
Blue Island**

▲ pH Sample Location



Data Source:
AECOM, 2017

Attachment A

Laboratory Analytical Reports

To enhance and sustain the world's built, natural and social environments

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

May 19, 2017

AECOM

100 S. Wacker, Suite 500

Chicago, IL 60606

Telephone: (312) 939-1000

Fax: (312) 939-4198

Analytical Report for STAT Work Order: 17050568 Revision 0

RE: 60428658, Cal-Sag Trail East, Blue Island, IL

Dear Shannon Flanagan:

STAT Analysis received 5 samples for the referenced project on 5/16/2017 4:15:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Craig Chawla

Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

Client: AECOM
Project: 60428658, Cal-Sag Trail East, Blue Island, IL
Work Order: 17050568 Revision 0

Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Tag Number | Collection Date | Date Received |
|----------------------|-------------------------|-------------------|------------------------|----------------------|
| 17050568-001A | CAL-BI-01 (0-1) | | 5/16/2017 9:30:00 AM | 5/16/2017 |
| 17050568-002A | CAL-BI-02 (0-1) | | 5/16/2017 9:45:00 AM | 5/16/2017 |
| 17050568-003A | CAL-BI-03 (0-1) | | 5/16/2017 9:50:00 AM | 5/16/2017 |
| 17050568-004A | CAL-BI-04 (0-1) | | 5/16/2017 10:35:00 AM | 5/16/2017 |
| 17050568-005A | CAL-BI-05 (0-1) | | 5/16/2017 10:45:00 AM | 5/16/2017 |

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: May 19, 2017

Date Printed: May 19, 2017

ANALYTICAL RESULTS

Client: AECOM

Project: 60428658, Cal-Sag Trail East, Blue Island, IL

Work Order: 17050568 Revision 0

Lab ID: 17050568-001

Collection Date: 5/16/2017 9:30:00 AM

Client Sample ID: CAL-BI-01 (0-1)

Matrix: Soil

| Analyses | Result | RL | MDL | Qualifier | Units | DF | Date Analyzed |
|------------|--------|----|-----|-----------|----------|----|---------------|
| pH (25 °C) | | | | | | | |
| pH | 7.67 | | | | pH Units | 1 | 5/18/2017 |

Lab ID: 17050568-002

Collection Date: 5/16/2017 9:45:00 AM

Client Sample ID: CAL-BI-02 (0-1)

Matrix: Soil

| Analyses | Result | RL | MDL | Qualifier | Units | DF | Date Analyzed |
|------------|--------|----|-----|-----------|----------|----|---------------|
| pH (25 °C) | | | | | | | |
| pH | 7.83 | | | | pH Units | 1 | 5/18/2017 |

Lab ID: 17050568-003

Collection Date: 5/16/2017 9:50:00 AM

Client Sample ID: CAL-BI-03 (0-1)

Matrix: Soil

| Analyses | Result | RL | MDL | Qualifier | Units | DF | Date Analyzed |
|------------|--------|----|-----|-----------|----------|----|---------------|
| pH (25 °C) | | | | | | | |
| pH | 8.15 | | | | pH Units | 1 | 5/18/2017 |

Lab ID: 17050568-004

Collection Date: 5/16/2017 10:35:00 AM

Client Sample ID: CAL-BI-04 (0-1)

Matrix: Soil

| Analyses | Result | RL | MDL | Qualifier | Units | DF | Date Analyzed |
|------------|--------|----|-----|-----------|----------|----|---------------|
| pH (25 °C) | | | | | | | |
| pH | 7.68 | | | | pH Units | 1 | 5/18/2017 |

Lab ID: 17050568-005

Collection Date: 5/16/2017 10:45:00 AM

Client Sample ID: CAL-BI-05 (0-1)

Matrix: Soil

| Analyses | Result | RL | MDL | Qualifier | Units | DF | Date Analyzed |
|------------|--------|----|-----|-----------|----------|----|---------------|
| pH (25 °C) | | | | | | | |
| pH | 7.52 | | | | pH Units | 1 | 5/18/2017 |

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below reporting limit
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL/MDL - Reporting Limit / Method Detection Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

Sample Receipt Checklist

Client Name AECOM (100 S. WACKER)

Date and Time Received: 5/16/2017 4:15:00 PM

Work Order Number 17050568

Received by: JOK

Checklist completed by: *[Signature]* 5/16/17
Signature Date

Reviewed by: JOK 5/17/17
Initials Date

Matrix: Carrier name Client Delivered

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels/containers? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container or Temp Blank temperature in compliance? Yes No Temperature 3.9 °C
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - Samples pH checked? Yes No Checked by: _____
- Water - Samples properly preserved? Yes No pH Adjusted? _____

Any No response must be detailed in the comments section below.

Comments: _____

Client / Person contacted: _____ Date contacted: _____ Contacted by: _____

Response: _____

CLIENT: AECOM
Work Order: 17050568
Project: 60428658, Cal-Sag Trail East, Blue Island, IL

ANALYTICAL QC SUMMARY REPORT

Wet Chemistry
BatchID: R132255

ANALYTICAL RUN SUMMARY

| SeqNo | Sample ID | Type | Test Code | Batch | DF | Date Analyzed |
|---------|------------------|------|-----------|---------|----|---------------|
| 3656853 | 17050511-001B | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656854 | 17050511-002B | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656855 | 17050511-002BDUP | DUP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656856 | 17050511-003B | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656857 | 17050511-004B | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656858 | 17050511-005B | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656859 | 17050567-001A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656860 | 17050567-002A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656861 | 17050567-003A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656862 | 17050567-004A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656863 | 17050567-005A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656864 | 17050567-006A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656865 | 17050567-007A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656866 | 17050567-008A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656867 | 17050568-001A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656868 | 17050568-002A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656869 | 17050568-003A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656870 | 17050568-004A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656871 | 17050568-005A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |
| 3656872 | 17050569-001A | SAMP | PH_S | R132255 | 1 | 05/18/2017 |

QC SUMMARY

| | | | | | | | | | | | | |
|------------------|--------------|-----------|----------|-----------|-------------|----------------|------------|------------|-------------|-------|-----------|------|
| Sample ID: | Customer ID: | SampType: | Units: | TestNo: | Prep Date: | Analysis Date: | Run ID: | SeqNo: | | | | |
| 17050511-002BDUP | ZZZZZ | DUP | pH Units | SW9045C | 5/18/2017 | 5/18/2017 | PH_170518D | 3656855 | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | % REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
| pH | | 7.82 | 0 | 0 | 0 | 0 | 0 | 0 | 7.85 | 0.383 | 20 | |

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits E - Value above quantitation range
 * - Non Accredited Parameter H/HT - Holding Time Exceeded



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: Cal-Sag Greenway Bike Trail - East End Office Phone Number, if available: _____

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

2800 block of Vermont Street (ISGS #2604A-5)

City: Blue Island State: IL Zip Code: 60406

County: Cook Township: Worth

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

Latitude: 41.6549 Longitude: -87.68872

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS Map Interpolation Photo Interpolation Survey Other

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

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: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Peterson

Contact: Tyler Peterson

Email, if available: Tyler.Peterson@illinois.gov

Email, if available: Tyler.Peterson@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: Cal-Sag Greenway Bike Trail - East End

Latitude: 41.6549 Longitude: -87.68872

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 2604A-05-B02 was sampled within the construction zone adjacent to ISGS #2604A-5 (Vacant Land). Refer to PSI Report for ISGS #2604A-5 (Vacant Land) including Table 4-3, and Figure 4-2.

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

See attached data summary table and associated laboratory data package J140307-3.

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

I, Neil J. Brown (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: Ecology and Environment, Inc.
 Street Address: 33 West Monroe Street
 City: Chicago State: IL Zip Code: 60603
 Phone: 312-578-9243

Neil J. Brown

Printed Name:

Neil J. Brown

3/14/18

Date:

Licensed Professional Engineer or
 Licensed Professional Geologist Signature:



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

Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #C-91-517-08; WorkOrder #38

Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in
Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

| SITE | ISGS #2604A-5 (Vacant Land) | Comparison Criteria | | | | | |
|-----------------------------|--------------------------------|---------------------|---------------------|-------------------|-------------|------------------------|--------|
| | | MACs | | | TACO | | |
| BORING | 2604A-05-B02 | Most Stringent | Within an MSA | Within Chicago | Residential | Construction Worker | SCGIER |
| SAMPLE | 2604A-05-B02 (0-2) | | | | | | |
| MATRIX | Soil | | | | | | |
| DEPTH (feet) | 0-2 | | | | | | |
| pH | 8.0 | | | | | | |
| PID > Bkgd. | -- | | | | | | |
| VOCs (None Detected) | | | | | | | |
| SVOCs (mg/kg) | | | | | | | |
| 2-Methylnaphthalene | 0.059 J | -- | -- | -- | -- | -- | -- |
| Acenaphthene | 0.022 J | 570 | -- | -- | 4,700 | 120,000 | -- |
| Acenaphthylene | 0.051 | -- | -- | -- | -- | -- | -- |
| Anthracene | 0.10 | 12,000 | -- | -- | 23,000 | 610,000 | -- |
| Benzo(a)anthracene | 0.41 | 0.9 | 1.8 | 1.1 | 1.8 | 170 | -- |
| Benzo(a)pyrene | 0.55 † | 0.09 | 2.1 | 1.3 | 2.1 | 17 | -- |
| Benzo(b)fluoranthene | 1.1 † | 0.9 | 2.1 | 1.5 | 2.1 | 170 | -- |
| Benzo(g,h,i)perylene | 0.21 | -- | -- | -- | -- | -- | -- |
| Benzo(k)fluoranthene | 0.34 | 9 | -- | -- | 9 | 1,700 | -- |
| Bis(2-ethylhexyl) phthalate | 0.14 J | 46 | -- | -- | 46 | 4,100 | -- |
| Butyl benzyl phthalate | 0.077 J | 930 | -- | -- | 930 | 930 | -- |
| Chrysene | 0.52 | 88 | -- | -- | 88 | 17,000 | -- |
| Dibenz(a,h)anthracene | 0.069 | 0.09 | 0.42 | 0.2 | 0.42 | 17 | -- |
| Fluoranthene | 0.92 | 3,100 | -- | -- | 3,100 | 82,000 | -- |
| Fluorene | 0.023 J | 560 | -- | -- | 3100 | 82,000 | -- |
| Indeno(1,2,3-cd)pyrene | 0.22 | 0.9 | 1.6 | 0.9 | 1.6 | 170 | -- |
| Naphthalene | 0.044 | 1.8 | -- | -- | 170 | 1.8 | -- |
| Phenanthrene | 0.44 | -- | -- | -- | -- | -- | -- |
| Pyrene | 0.88 | 2,300 | -- | -- | 2,300 | 61,000 | -- |
| Inorganics (mg/kg) | | | | | | | |
| Antimony | 0.45 J | 5 | -- | -- | 31 | 82 | -- |
| Arsenic | 10 | 11.3 | 13 | -- | 13 | 61 | -- |
| Barium | 94 | 1,500 | -- | -- | 5,500 | 14,000 | -- |
| Beryllium | 0.57 | 22 | -- | -- | 160 | 410 | -- |
| Cadmium | 0.85 | 5.2 | -- | -- | 78 | 200 | -- |
| Calcium | 55,000 | -- | -- | -- | -- | -- | -- |
| Chromium | 16 | 21 | -- | -- | 230 | 690 | -- |
| Cobalt | 6.2 | 20 | -- | -- | 4,700 | 12,000 | -- |
| Copper | 44 | 2,900 | -- | -- | 2,900 | 8,200 | -- |
| Iron | 21,000 †m | 15,000 | 15,900 | -- | -- | -- | -- |
| Lead | 150 † | 107 | -- | -- | 400 | 700 | -- |
| Magnesium | 19,000 | 325,000 | -- | -- | -- | 730,000 | -- |
| Manganese | 430 | 630 | 636 | -- | 1,600 | 4,100 | -- |
| Mercury | 0.20 | 0.89 | -- | -- | 10 | 0.1 | -- |
| Nickel | 18 | 100 | -- | -- | 1,600 | 4,100 | -- |
| Potassium | 990 | -- | -- | -- | -- | -- | -- |
| Selenium | 0.88 | 1.3 | -- | -- | 390 | 1,000 | -- |
| Sodium | 380 | -- | -- | -- | -- | -- | -- |
| Vanadium | 14 | 550 | -- | -- | 550 | 1,400 | -- |
| Zinc | 190 | 5,100 | -- | -- | 23,000 | 61,000 | -- |
| TCLP Metals (mg/L) | | | | | | | |
| Barium | 0.44 J | -- | -- | -- | -- | -- | 2 |
| Cadmium | 0.0040 J | -- | -- | -- | -- | -- | 0.005 |
| Iron | ND U | -- | -- | -- | -- | -- | 5 |
| Lead | ND U | -- | -- | -- | -- | -- | 0.0075 |
| Manganese | 0.93 L | -- | -- | -- | -- | -- | 0.15 |
| Zinc | 0.38 J | -- | -- | -- | -- | -- | 5 |
| SPLP Metals (mg/L) | | | | | | | |
| Manganese | 0.24 L | -- | -- | -- | -- | -- | 0.15 |

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: 500-140307-3
Client Project/Site: IDOT - 176-001-WO038

For:
Ecology and Environment, Inc.
33 West Monroe St.
Suite 1410
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:
2/6/2018 1:06:29 PM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

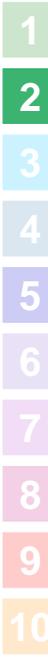


Table of Contents

| | |
|---------------------------------|----|
| Cover Page | 1 |
| Table of Contents | 2 |
| Case Narrative | 3 |
| Detection Summary | 4 |
| Sample Summary | 11 |
| Client Sample Results | 12 |
| Definitions | 36 |
| Certification Summary | 37 |
| Chain of Custody | 38 |
| Receipt Checklists | 39 |

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

Job ID: 500-140307-3

Laboratory: TestAmerica Chicago

Narrative

**Job Narrative
500-140307-3**

Receipt

The samples were received on 1/30/2018 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8° C and 4.3° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for 418739 and 418563 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

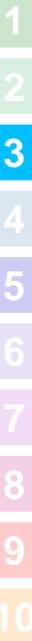
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

Client Sample ID: 2604A-05-B02 (0-2)

Lab Sample ID: 500-140307-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|--------|--------|-------|-----|-----|---|--------|-----------|
| Naphthalene | 0.044 | | 0.038 | 0.0058 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.059 | J | 0.076 | 0.0069 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Acenaphthylene | 0.051 | | 0.038 | 0.0050 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Acenaphthene | 0.022 | J | 0.038 | 0.0068 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Fluorene | 0.023 | J | 0.038 | 0.0053 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.44 | | 0.038 | 0.0053 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Anthracene | 0.10 | | 0.038 | 0.0063 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.92 | | 0.038 | 0.0070 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Pyrene | 0.88 | | 0.038 | 0.0075 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Butyl benzyl phthalate | 0.077 | J | 0.19 | 0.072 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 0.41 | | 0.038 | 0.0051 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Chrysene | 0.52 | | 0.038 | 0.010 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Bis(2-ethylhexyl) phthalate | 0.14 | J | 0.19 | 0.069 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 1.1 | | 0.038 | 0.0082 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.34 | | 0.038 | 0.011 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.55 | | 0.038 | 0.0073 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.22 | | 0.038 | 0.0098 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.069 | | 0.038 | 0.0073 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.21 | | 0.038 | 0.012 | mg/Kg | 1 | ☼ | ☼ | 8270D | Total/NA |
| Antimony | 0.45 | J | 1.2 | 0.23 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Arsenic | 10 | | 0.58 | 0.20 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Barium | 94 | | 0.58 | 0.066 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Beryllium | 0.57 | | 0.23 | 0.054 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Boron | 11 | B | 2.9 | 0.27 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Cadmium | 0.85 | | 0.12 | 0.021 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Calcium | 55000 | B | 120 | 20 | mg/Kg | 10 | ☼ | ☼ | 6010B | Total/NA |
| Chromium | 16 | | 0.58 | 0.29 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Cobalt | 6.2 | | 0.29 | 0.076 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Copper | 44 | | 0.58 | 0.16 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Iron | 21000 | | 12 | 6.1 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Lead | 150 | B | 0.29 | 0.13 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Magnesium | 19000 | | 5.8 | 2.9 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Manganese | 430 | | 0.58 | 0.084 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Nickel | 18 | | 0.58 | 0.17 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Potassium | 990 | | 29 | 10 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Selenium | 0.88 | | 0.58 | 0.34 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Sodium | 380 | | 58 | 8.6 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Vanadium | 14 | | 0.29 | 0.069 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Zinc | 190 | | 1.2 | 0.51 | mg/Kg | 1 | ☼ | ☼ | 6010B | Total/NA |
| Barium | 0.44 | J | 0.50 | 0.050 | mg/L | 1 | | | 6010B | TCLP |
| Boron | 0.13 | J B | 0.50 | 0.050 | mg/L | 1 | | | 6010B | TCLP |
| Cadmium | 0.0040 | J | 0.0050 | 0.0020 | mg/L | 1 | | | 6010B | TCLP |
| Manganese | 0.93 | | 0.025 | 0.010 | mg/L | 1 | | | 6010B | TCLP |
| Zinc | 0.38 | J | 0.50 | 0.020 | mg/L | 1 | | | 6010B | TCLP |

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

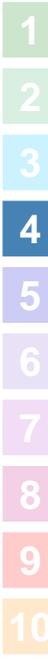
Client Sample ID: 2604A-05-B02 (0-2) (Continued)

Lab Sample ID: 500-140307-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|-----------|--------|-----------|-------|--------|-------|---------|---|--------|-----------|
| Manganese | 0.24 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | SPLP East |
| Mercury | 0.20 | | 0.017 | 0.0057 | mg/Kg | 1 | * | 7471B | Total/NA |
| pH | 8.0 | | 0.20 | 0.20 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



Sample Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|--------------------|--------|----------------|----------------|
| 500-140307-7 | 2604A-05-B02 (0-2) | Solid | 01/30/18 10:50 | 01/30/18 15:55 |

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

Client Sample ID: 2604A-05-B02 (0-2)

Lab Sample ID: 500-140307-7

Date Collected: 01/30/18 10:50

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 85.4

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|---------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acetone | <0.017 | | 0.017 | 0.0073 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Benzene | <0.0017 | | 0.0017 | 0.00043 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Bromodichloromethane | <0.0017 | | 0.0017 | 0.00034 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Bromoform | <0.0017 | | 0.0017 | 0.00049 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Bromomethane | <0.0042 | | 0.0042 | 0.0016 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 2-Butanone (MEK) | <0.0042 | | 0.0042 | 0.0019 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Carbon disulfide | <0.0042 | | 0.0042 | 0.00088 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Carbon tetrachloride | <0.0017 | | 0.0017 | 0.00049 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Chlorobenzene | <0.0017 | | 0.0017 | 0.00062 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Chloroethane | <0.0042 | | 0.0042 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Chloroform | <0.0017 | | 0.0017 | 0.00058 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Chloromethane | <0.0042 | | 0.0042 | 0.0017 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| cis-1,2-Dichloroethene | <0.0017 | | 0.0017 | 0.00047 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| cis-1,3-Dichloropropene | <0.0017 | | 0.0017 | 0.00051 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Dibromochloromethane | <0.0017 | | 0.0017 | 0.00055 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,1-Dichloroethane | <0.0017 | | 0.0017 | 0.00058 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,2-Dichloroethane | <0.0042 | | 0.0042 | 0.0013 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,1-Dichloroethene | <0.0017 | | 0.0017 | 0.00058 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,2-Dichloropropane | <0.0017 | | 0.0017 | 0.00044 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,3-Dichloropropane, Total | <0.0017 | | 0.0017 | 0.00059 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Ethylbenzene | <0.0017 | | 0.0017 | 0.00081 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 2-Hexanone | <0.0042 | | 0.0042 | 0.0013 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Methylene Chloride | <0.0042 | | 0.0042 | 0.0017 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 4-Methyl-2-pentanone (MIBK) | <0.0042 | | 0.0042 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Methyl tert-butyl ether | <0.0017 | | 0.0017 | 0.00049 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Styrene | <0.0017 | | 0.0017 | 0.00051 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.0017 | | 0.0017 | 0.00054 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Tetrachloroethene | <0.0017 | | 0.0017 | 0.00057 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Toluene | <0.0017 | | 0.0017 | 0.00043 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| trans-1,2-Dichloroethene | <0.0017 | | 0.0017 | 0.00075 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| trans-1,3-Dichloropropene | <0.0017 | | 0.0017 | 0.00059 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,1,1-Trichloroethane | <0.0017 | | 0.0017 | 0.00057 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,1,2-Trichloroethane | <0.0017 | | 0.0017 | 0.00072 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Trichloroethene | <0.0017 | | 0.0017 | 0.00057 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Vinyl acetate | <0.0042 | | 0.0042 | 0.0015 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Vinyl chloride | <0.0017 | | 0.0017 | 0.00075 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Xylenes, Total | <0.0034 | | 0.0034 | 0.00054 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:01 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 84 | | 75 - 131 | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Dibromofluoromethane | 98 | | 75 - 126 | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 88 | | 70 - 134 | 01/30/18 17:52 | 02/01/18 14:01 | 1 |
| Toluene-d8 (Surr) | 93 | | 75 - 124 | 01/30/18 17:52 | 02/01/18 14:01 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Phenol | <0.19 | | 0.19 | 0.084 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Bis(2-chloroethyl)ether | <0.19 | | 0.19 | 0.057 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 1,3-Dichlorobenzene | <0.19 | | 0.19 | 0.043 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 1,4-Dichlorobenzene | <0.19 | | 0.19 | 0.048 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

Client Sample ID: 2604A-05-B02 (0-2)

Lab Sample ID: 500-140307-7

Date Collected: 01/30/18 10:50

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 85.4

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|----------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| 1,2-Dichlorobenzene | <0.19 | | 0.19 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2-Methylphenol | <0.19 | | 0.19 | 0.061 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,2'-oxybis[1-chloropropane] | <0.19 | | 0.19 | 0.044 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| N-Nitrosodi-n-propylamine | <0.076 | | 0.076 | 0.046 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Hexachloroethane | <0.19 | | 0.19 | 0.057 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2-Chlorophenol | <0.19 | | 0.19 | 0.064 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Nitrobenzene | <0.038 | | 0.038 | 0.0094 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Bis(2-chloroethoxy)methane | <0.19 | | 0.19 | 0.039 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 1,2,4-Trichlorobenzene | <0.19 | | 0.19 | 0.041 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Isophorone | <0.19 | | 0.19 | 0.042 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,4-Dimethylphenol | <0.38 | | 0.38 | 0.14 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Hexachlorobutadiene | <0.19 | | 0.19 | 0.059 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Naphthalene | 0.044 | | 0.038 | 0.0058 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,4-Dichlorophenol | <0.38 | | 0.38 | 0.090 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 4-Chloroaniline | <0.76 | | 0.76 | 0.18 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,4,6-Trichlorophenol | <0.38 | | 0.38 | 0.13 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,4,5-Trichlorophenol | <0.38 | | 0.38 | 0.086 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Hexachlorocyclopentadiene | <0.76 | | 0.76 | 0.22 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2-Methylnaphthalene | 0.059 J | | 0.076 | 0.0069 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2-Nitroaniline | <0.19 | | 0.19 | 0.051 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2-Chloronaphthalene | <0.19 | | 0.19 | 0.042 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 4-Chloro-3-methylphenol | <0.38 | | 0.38 | 0.13 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,6-Dinitrotoluene | <0.19 | | 0.19 | 0.074 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2-Nitrophenol | <0.38 | | 0.38 | 0.089 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 3-Nitroaniline | <0.38 | | 0.38 | 0.12 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Dimethyl phthalate | <0.19 | | 0.19 | 0.049 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,4-Dinitrophenol | <0.76 | | 0.76 | 0.66 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Acenaphthylene | 0.051 | | 0.038 | 0.0050 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,4-Dinitrotoluene | <0.19 | | 0.19 | 0.060 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Acenaphthene | 0.022 J | | 0.038 | 0.0068 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Dibenzofuran | <0.19 | | 0.19 | 0.044 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 4-Nitrophenol | <0.76 | | 0.76 | 0.36 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Fluorene | 0.023 J | | 0.038 | 0.0053 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 4-Nitroaniline | <0.38 | | 0.38 | 0.16 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 4-Bromophenyl phenyl ether | <0.19 | | 0.19 | 0.050 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Hexachlorobenzene | <0.076 | | 0.076 | 0.0088 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Diethyl phthalate | <0.19 | | 0.19 | 0.064 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 4-Chlorophenyl phenyl ether | <0.19 | | 0.19 | 0.044 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Pentachlorophenol | <0.76 | | 0.76 | 0.61 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| N-Nitrosodiphenylamine | <0.19 | | 0.19 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 4,6-Dinitro-2-methylphenol | <0.76 | | 0.76 | 0.30 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Phenanthrene | 0.44 | | 0.038 | 0.0053 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Anthracene | 0.10 | | 0.038 | 0.0063 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Carbazole | <0.19 | | 0.19 | 0.094 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Di-n-butyl phthalate | <0.19 | | 0.19 | 0.058 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Fluoranthene | 0.92 | | 0.038 | 0.0070 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Pyrene | 0.88 | | 0.038 | 0.0075 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Butyl benzyl phthalate | 0.077 J | | 0.19 | 0.072 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Benzo[a]anthracene | 0.41 | | 0.038 | 0.0051 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

Client Sample ID: 2604A-05-B02 (0-2)

Lab Sample ID: 500-140307-7

Date Collected: 01/30/18 10:50

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 85.4

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|--------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Chrysene | 0.52 | | 0.038 | 0.010 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 3,3'-Dichlorobenzidine | <0.19 | | 0.19 | 0.053 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Bis(2-ethylhexyl) phthalate | 0.14 | J | 0.19 | 0.069 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Di-n-octyl phthalate | <0.19 | | 0.19 | 0.062 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Benzo[b]fluoranthene | 1.1 | | 0.038 | 0.0082 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Benzo[k]fluoranthene | 0.34 | | 0.038 | 0.011 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Benzo[a]pyrene | 0.55 | | 0.038 | 0.0073 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.22 | | 0.038 | 0.0098 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Dibenz(a,h)anthracene | 0.069 | | 0.038 | 0.0073 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Benzo[g,h,i]perylene | 0.21 | | 0.038 | 0.012 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 3 & 4 Methylphenol | <0.19 | | 0.19 | 0.063 | mg/Kg | ☼ | 01/31/18 08:30 | 02/01/18 19:06 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorophenol | 87 | | 46 - 133 | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Phenol-d5 | 79 | | 46 - 125 | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Nitrobenzene-d5 | 73 | | 41 - 120 | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2-Fluorobiphenyl | 82 | | 44 - 121 | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| 2,4,6-Tribromophenol | 79 | | 25 - 139 | 01/31/18 08:30 | 02/01/18 19:06 | 1 |
| Terphenyl-d14 | 102 | | 35 - 160 | 01/31/18 08:30 | 02/01/18 19:06 | 1 |

Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|--------------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Antimony | 0.45 | J | 1.2 | 0.23 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Arsenic | 10 | | 0.58 | 0.20 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Barium | 94 | | 0.58 | 0.066 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Beryllium | 0.57 | | 0.23 | 0.054 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Boron | 11 | B | 2.9 | 0.27 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Cadmium | 0.85 | | 0.12 | 0.021 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Calcium | 55000 | B | 120 | 20 | mg/Kg | ☼ | 02/01/18 06:59 | 02/02/18 14:36 | 10 |
| Chromium | 16 | | 0.58 | 0.29 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Cobalt | 6.2 | | 0.29 | 0.076 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Copper | 44 | | 0.58 | 0.16 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Iron | 21000 | | 12 | 6.1 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Lead | 150 | B | 0.29 | 0.13 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Magnesium | 19000 | | 5.8 | 2.9 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Manganese | 430 | | 0.58 | 0.084 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Nickel | 18 | | 0.58 | 0.17 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Potassium | 990 | | 29 | 10 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Selenium | 0.88 | | 0.58 | 0.34 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Silver | <0.29 | | 0.29 | 0.075 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Sodium | 380 | | 58 | 8.6 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Thallium | <0.58 | | 0.58 | 0.29 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Vanadium | 14 | | 0.29 | 0.069 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |
| Zinc | 190 | | 1.2 | 0.51 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:30 | 1 |

Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|-------------|------------|--------|--------|------|---|----------------|----------------|---------|
| Barium | 0.44 | J | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Beryllium | <0.0040 | | 0.0040 | 0.0040 | mg/L | | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Boron | 0.13 | J B | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:30 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

Client Sample ID: 2604A-05-B02 (0-2)

Lab Sample ID: 500-140307-7

Date Collected: 01/30/18 10:50

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 85.4

Method: 6010B - Metals (ICP) - TCLP (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|---------------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Cadmium | 0.0040 | J | 0.0050 | 0.0020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Chromium | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Cobalt | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Iron | <0.40 | | 0.40 | 0.20 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Lead | <0.0075 | | 0.0075 | 0.0075 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Manganese | 0.93 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Nickel | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Selenium | <0.050 | | 0.050 | 0.020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Silver | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |
| Zinc | 0.38 | J | 0.50 | 0.020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:30 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|-------------|-----------|-------|-------|------|---|----------------|----------------|---------|
| Manganese | 0.24 | | 0.025 | 0.010 | mg/L | - | 02/01/18 14:17 | 02/02/18 17:24 | 1 |

Method: 6020A - Metals (ICP/MS) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Antimony | <0.0060 | | 0.0060 | 0.0060 | mg/L | - | 02/01/18 08:40 | 02/01/18 17:59 | 1 |
| Thallium | <0.0020 | | 0.0020 | 0.0020 | mg/L | - | 02/01/18 08:40 | 02/01/18 17:59 | 1 |

Method: 7470A - TCLP Mercury - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|---------|------|---|----------------|----------------|---------|
| Mercury | <0.00020 | | 0.00020 | 0.00020 | mg/L | - | 02/01/18 11:10 | 02/02/18 10:02 | 1 |

Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|-------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.20 | | 0.017 | 0.0057 | mg/Kg | ☼ | 01/31/18 14:45 | 02/01/18 08:54 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|------------|-----------|------|------|------|---|----------|----------------|---------|
| pH | 8.0 | | 0.20 | 0.20 | SU | - | | 02/02/18 13:27 | 1 |

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|---|
| * | LCS or LCSD is outside acceptance limits. |

GC/MS Semi VOA

| 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. |

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. |
| B | Compound was found in the blank and sample. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | 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: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-3

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 | 04-30-18 |

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

| Analysis Method | Prep Method | Matrix | Analyte |
|-----------------|-------------|--------|----------------------------|
| 6020A | 3010A | Solid | Antimony |
| 6020A | 3010A | Solid | Thallium |
| 8260B | 5035 | Solid | 1,3-Dichloropropene, Total |
| 9045D | | Solid | pH |
| Moisture | | Solid | Percent Moisture |
| Moisture | | Solid | Percent Solids |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

Chain of Custody Record

Lab Job #: 500-140307
 Chain of Custody Number: EE93803
 Page 28 of 43
 Temperature °C of Cooler: 2.8

Report To: _____ (optional)
 Contact: _____
 Company: _____
 Address: _____
 Address: _____
 Phone: _____
 Fax: _____
 E-Mail: _____

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

| Client | Project Name | Project Location/State | Sample | MS/MSD | Sample ID | Sampling | | Preservative | Parameter | # of Containers | Matrix | Comments |
|--|---|------------------------|-------------|----------|-----------|------------|----------|--------------|------------|-----------------|----------|----------|
| | | | | | | Date | Time | | | | | |
| Client: <u>ENE</u> | Client Project #: <u>1604341.003802</u> | | | | | | | | | | | |
| Project Name: <u>Cal-Sag Gateway Trail - Bee Island east</u> | Lab Project #: _____ | | | | | | | | | | | |
| Project Location/State: <u>Coak, FL</u> | Lab P/N: <u>D. Wright</u> | | | | | | | | | | | |
| Sample: <u>E. Bender</u> | | | | | | | | | | | | |
| 3 | <u>2604A-05-B05(0-2)</u> | <u>1/30/18</u> | <u>1030</u> | <u>2</u> | <u>S</u> | <u>Vec</u> | <u>X</u> | <u>Vec</u> | <u>Vec</u> | <u>X</u> | <u>X</u> | |
| 4 | <u>2604A-05-B01(0-2)</u> | <u>1/30/18</u> | <u>1030</u> | <u>2</u> | <u>S</u> | <u>Vec</u> | <u>X</u> | <u>Vec</u> | <u>Vec</u> | <u>X</u> | <u>X</u> | |
| 5 | <u>2604A-05-B03(0-2)</u> | <u>1/30/18</u> | <u>1040</u> | <u>2</u> | <u>S</u> | <u>Vec</u> | <u>X</u> | <u>Vec</u> | <u>Vec</u> | <u>X</u> | <u>X</u> | |
| 6 | <u>2604A-05-B03(0-2)</u> | <u>1/30/18</u> | <u>1040</u> | <u>2</u> | <u>S</u> | <u>Vec</u> | <u>X</u> | <u>Vec</u> | <u>Vec</u> | <u>X</u> | <u>X</u> | |
| 7 | <u>2604A-05-B02(0-2)</u> | <u>1/30/18</u> | <u>1050</u> | <u>2</u> | <u>S</u> | <u>Vec</u> | <u>X</u> | <u>Vec</u> | <u>Vec</u> | <u>X</u> | <u>X</u> | |
| 8 | <u>2604A-05-B01(0-2)</u> | <u>1/30/18</u> | <u>1100</u> | <u>2</u> | <u>S</u> | <u>Vec</u> | <u>X</u> | <u>Vec</u> | <u>Vec</u> | <u>X</u> | <u>X</u> | |

Turnaround Time Required (Business Days)
 1 Day _____ 2 Days _____ 5 Days _____ 7 Days _____ 10 Days _____ 15 Days _____ Other _____

Requested Due Date _____

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

Received By: P. Neal Date: 1/30/18 Time: 1520
 Company: TA

Received By: Shirley Jensen Date: 01/30/18 Time: 1555
 Company: TA

Received By: _____ Date: _____ Time: _____
 Company: _____

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

Client Comments: _____

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

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140307-3

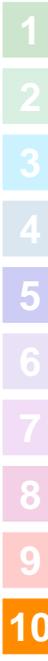
Login Number: 140307

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

| Question | Answer | Comment |
|--|--------|----------|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.8, 4.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |





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: Cal-Sag Greenway Bike Trail - East End Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
13200 block of I-57 (ISGS #2604A-12)

City: Blue Island State: IL Zip Code: 60406

County: Cook Township: Calumet

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

Latitude: 41.65490 Longitude: -87.66188

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS Map Interpolation Photo Interpolation Survey Other

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

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: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Peterson

Contact: Tyler Peterson

Email, if available: Tyler.Peterson@illinois.gov

Email, if available: Tyler.Peterson@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

Project Name: Cal-Sag Greenway Bike Trail - East End

Latitude: 41.65490 Longitude: -87.66188

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 2604A-12-B01 was sampled within the construction zone adjacent to ISGS #2604A-12 (Bridge). Refer to PSI Report for ISGS #2604A-12 (Bridge) including Table 4-3, and Figure 4-3.

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

See attached data summary table and associated laboratory data package J140307-6.

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

I, Neil J. Brown (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: Ecology and Environment, Inc.
 Street Address: 33 West Monroe Street
 City: Chicago State: IL Zip Code: 60603
 Phone: 312-578-9243

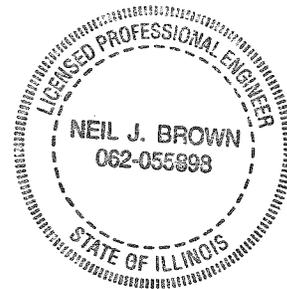
Neil J. Brown

Printed Name:

Neil J. Brown
 Licensed Professional Engineer or
 Licensed Professional Geologist Signature:

3/14/18

Date:



Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #C-91-517-08; WorkOrder #38

Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

| SITE | ISGS #2604A-12 (Bridge) | Comparison Criteria | | | | | |
|---------------------------|----------------------------|---------------------|---------------------|-------------------|-------------|------------------------|--------|
| | | MACs | | | TACO | | |
| BORING | 2604A-12-B01 | Most Stringent | Within an MSA | Within Chicago | Residential | Construction Worker | SCGIER |
| SAMPLE | 2604A-12-B01 (0-1) | | | | | | |
| MATRIX | Soil | | | | | | |
| DEPTH (feet) | 0-1 | | | | | | |
| pH | 8.3 | | | | | | |
| PID > Bkgd. | -- | | | | | | |
| VOCs (mg/kg) | | | | | | | |
| Acetone | 0.011 J | 25 | -- | -- | 70,000 | 100,000 | -- |
| SVOCs (mg/kg) | | | | | | | |
| Benzo(a)anthracene | 0.014 J | 0.9 | 1.8 | 1.1 | 1.8 | 170 | -- |
| Benzo(a)pyrene | 0.015 J | 0.09 | 2.1 | 1.3 | 2.1 | 17 | -- |
| Benzo(b)fluoranthene | 0.022 J | 0.9 | 2.1 | 1.5 | 2.1 | 170 | -- |
| Benzo(g,h,i)perylene | 0.016 J | -- | -- | -- | -- | -- | -- |
| Benzo(k)fluoranthene | 0.011 J | 9 | -- | -- | 9 | 1,700 | -- |
| Chrysene | 0.023 J | 88 | -- | -- | 88 | 17,000 | -- |
| Fluoranthene | 0.026 J | 3,100 | -- | -- | 3,100 | 82,000 | -- |
| Indeno(1,2,3-cd)pyrene | 0.013 J | 0.9 | 1.6 | 0.9 | 1.6 | 170 | -- |
| Phenanthrene | 0.016 J | -- | -- | -- | -- | -- | -- |
| Pyrene | 0.026 J | 2,300 | -- | -- | 2,300 | 61,000 | -- |
| Inorganics (mg/kg) | | | | | | | |
| Arsenic | 5.8 | 11.3 | 13 | -- | 13 | 61 | -- |
| Barium | 15 | 1,500 | -- | -- | 5,500 | 14,000 | -- |
| Beryllium | 0.40 | 22 | -- | -- | 160 | 410 | -- |
| Cadmium | 0.057 J | 5.2 | -- | -- | 78 | 200 | -- |
| Calcium | 150,000 | -- | -- | -- | -- | -- | -- |
| Chromium | 8.1 | 21 | -- | -- | 230 | 690 | -- |
| Cobalt | 5.6 | 20 | -- | -- | 4,700 | 12,000 | -- |
| Copper | 10 | 2,900 | -- | -- | 2,900 | 8,200 | -- |
| Iron | 9,900 | 15,000 | 15,900 | -- | -- | -- | -- |
| Lead | 13 | 107 | -- | -- | 400 | 700 | -- |
| Magnesium | 88,000 | 325,000 | -- | -- | -- | 730,000 | -- |
| Manganese | 250 | 630 | 636 | -- | 1,600 | 4,100 | -- |
| Mercury | 0.015 J | 0.89 | -- | -- | 10 | 0.1 | -- |
| Nickel | 14 | 100 | -- | -- | 1,600 | 4,100 | -- |
| Potassium | 2,300 | -- | -- | -- | -- | -- | -- |
| Sodium | 240 | -- | -- | -- | -- | -- | -- |
| Vanadium | 7.8 | 550 | -- | -- | 550 | 1,400 | -- |
| Zinc | 24 | 5,100 | -- | -- | 23,000 | 61,000 | -- |
| TCLP Metals (mg/L) | | | | | | | |
| Barium | 0.18 J | -- | -- | -- | -- | -- | 2 |
| Cobalt | 0.043 | -- | -- | -- | -- | -- | 1 |
| Iron | 0.20 J | -- | -- | -- | -- | -- | 5 |
| Manganese | 1.3 L | -- | -- | -- | -- | -- | 0.15 |
| Nickel | 0.037 | -- | -- | -- | -- | -- | 0.1 |
| Zinc | 0.024 J | -- | -- | -- | -- | -- | 5 |
| SPLP Metals (mg/L) | | | | | | | |
| Manganese | 0.019 J | -- | -- | -- | -- | -- | 0.15 |

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: 500-140307-6
Client Project/Site: IDOT - 176-001-WO038

For:
Ecology and Environment, Inc.
33 West Monroe St.
Suite 1410
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:
2/6/2018 1:07:44 PM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

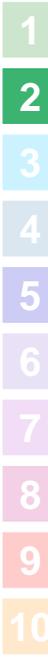


Table of Contents

| | |
|---------------------------------|----|
| Cover Page | 1 |
| Table of Contents | 2 |
| Case Narrative | 3 |
| Detection Summary | 4 |
| Sample Summary | 5 |
| Client Sample Results | 6 |
| Definitions | 10 |
| Certification Summary | 11 |
| Chain of Custody | 12 |
| Receipt Checklists | 13 |

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

Job ID: 500-140307-6

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-140307-6

Receipt

The samples were received on 1/30/2018 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8° C and 4.3° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for 418739 and 418563 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

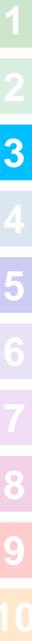
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

Client Sample ID: 2604A-12-B01 (0-1)

Lab Sample ID: 500-140307-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|--------|-------|---------|---|--------|-----------|
| Acetone | 0.011 | J | 0.016 | 0.0068 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Phenanthrene | 0.016 | J | 0.034 | 0.0048 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.026 | J | 0.034 | 0.0064 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.026 | J | 0.034 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 0.014 | J | 0.034 | 0.0046 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.023 | J | 0.034 | 0.0093 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.022 | J | 0.034 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.011 | J | 0.034 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.015 | J | 0.034 | 0.0066 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.013 | J | 0.034 | 0.0089 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.016 | J | 0.034 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 5.8 | | 0.52 | 0.18 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 15 | | 0.52 | 0.059 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.40 | | 0.21 | 0.049 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Boron | 16 | B | 2.6 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.057 | J | 0.10 | 0.019 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 150000 | B | 100 | 18 | mg/Kg | 10 | ☼ | 6010B | Total/NA |
| Chromium | 8.1 | | 0.52 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 5.6 | | 0.26 | 0.068 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 10 | | 0.52 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 9900 | | 10 | 5.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 13 | B | 0.26 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 88000 | | 52 | 26 | mg/Kg | 10 | ☼ | 6010B | Total/NA |
| Manganese | 250 | | 0.52 | 0.075 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 14 | | 0.52 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 2300 | | 26 | 9.2 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 240 | | 52 | 7.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 7.8 | | 0.26 | 0.061 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 24 | | 1.0 | 0.46 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 0.18 | J | 0.50 | 0.050 | mg/L | 1 | | 6010B | TCLP |
| Boron | 0.14 | J B | 0.50 | 0.050 | mg/L | 1 | | 6010B | TCLP |
| Cobalt | 0.043 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Iron | 0.20 | J | 0.40 | 0.20 | mg/L | 1 | | 6010B | TCLP |
| Manganese | 1.3 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Nickel | 0.037 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Zinc | 0.024 | J | 0.50 | 0.020 | mg/L | 1 | | 6010B | TCLP |
| Manganese | 0.019 | J | 0.025 | 0.010 | mg/L | 1 | | 6010B | SPLP East |
| Mercury | 0.015 | J | 0.016 | 0.0053 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.3 | | 0.20 | 0.20 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Sample Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|--------------------|--------|----------------|----------------|
| 500-140307-11 | 2604A-12-B01 (0-1) | Solid | 01/30/18 12:20 | 01/30/18 15:55 |

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

Client Sample ID: 2604A-12-B01 (0-1)

Lab Sample ID: 500-140307-11

Date Collected: 01/30/18 12:20

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 93.5

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|---------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acetone | 0.011 | J | 0.016 | 0.0068 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Benzene | <0.0016 | | 0.0016 | 0.00040 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Bromodichloromethane | <0.0016 | | 0.0016 | 0.00032 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Bromoform | <0.0016 | | 0.0016 | 0.00045 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Bromomethane | <0.0039 | | 0.0039 | 0.0015 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 2-Butanone (MEK) | <0.0039 | | 0.0039 | 0.0017 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Carbon disulfide | <0.0039 | | 0.0039 | 0.00081 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Carbon tetrachloride | <0.0016 | | 0.0016 | 0.00045 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Chlorobenzene | <0.0016 | | 0.0016 | 0.00057 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Chloroethane | <0.0039 | | 0.0039 | 0.0011 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Chloroform | <0.0016 | | 0.0016 | 0.00054 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Chloromethane | <0.0039 | | 0.0039 | 0.0016 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| cis-1,2-Dichloroethene | <0.0016 | | 0.0016 | 0.00043 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| cis-1,3-Dichloropropene | <0.0016 | | 0.0016 | 0.00047 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Dibromochloromethane | <0.0016 | | 0.0016 | 0.00051 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,1-Dichloroethane | <0.0016 | | 0.0016 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,2-Dichloroethane | <0.0039 | | 0.0039 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,1-Dichloroethene | <0.0016 | | 0.0016 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,2-Dichloropropane | <0.0016 | | 0.0016 | 0.00040 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,3-Dichloropropane, Total | <0.0016 | | 0.0016 | 0.00054 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Ethylbenzene | <0.0016 | | 0.0016 | 0.00074 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 2-Hexanone | <0.0039 | | 0.0039 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Methylene Chloride | <0.0039 | | 0.0039 | 0.0015 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | <0.0039 | | 0.0039 | 0.0011 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Methyl tert-butyl ether | <0.0016 | | 0.0016 | 0.00046 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Styrene | <0.0016 | | 0.0016 | 0.00047 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.0016 | | 0.0016 | 0.00050 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Tetrachloroethene | <0.0016 | | 0.0016 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Toluene | <0.0016 | | 0.0016 | 0.00039 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| trans-1,2-Dichloroethene | <0.0016 | | 0.0016 | 0.00069 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| trans-1,3-Dichloropropene | <0.0016 | | 0.0016 | 0.00054 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,1,1-Trichloroethane | <0.0016 | | 0.0016 | 0.00052 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,1,2-Trichloroethane | <0.0016 | | 0.0016 | 0.00067 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Trichloroethene | <0.0016 | | 0.0016 | 0.00052 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Vinyl acetate | <0.0039 | | 0.0039 | 0.0014 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Vinyl chloride | <0.0016 | | 0.0016 | 0.00069 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Xylenes, Total | <0.0031 | | 0.0031 | 0.00050 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:42 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 89 | | 75 - 131 | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Dibromofluoromethane | 103 | | 75 - 126 | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 89 | | 70 - 134 | 01/30/18 17:52 | 02/01/18 15:42 | 1 |
| Toluene-d8 (Surr) | 92 | | 75 - 124 | 01/30/18 17:52 | 02/01/18 15:42 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Phenol | <0.17 | | 0.17 | 0.076 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Bis(2-chloroethyl)ether | <0.17 | | 0.17 | 0.051 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 1,3-Dichlorobenzene | <0.17 | | 0.17 | 0.039 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 1,4-Dichlorobenzene | <0.17 | | 0.17 | 0.044 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

Client Sample ID: 2604A-12-B01 (0-1)

Lab Sample ID: 500-140307-11

Date Collected: 01/30/18 12:20

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 93.5

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| 1,2-Dichlorobenzene | <0.17 | | 0.17 | 0.041 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2-Methylphenol | <0.17 | | 0.17 | 0.055 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,2'-oxybis[1-chloropropane] | <0.17 | | 0.17 | 0.040 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| N-Nitrosodi-n-propylamine | <0.069 | | 0.069 | 0.042 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Hexachloroethane | <0.17 | | 0.17 | 0.052 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2-Chlorophenol | <0.17 | | 0.17 | 0.058 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Nitrobenzene | <0.034 | | 0.034 | 0.0086 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Bis(2-chloroethoxy)methane | <0.17 | | 0.17 | 0.035 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 1,2,4-Trichlorobenzene | <0.17 | | 0.17 | 0.037 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Isophorone | <0.17 | | 0.17 | 0.038 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,4-Dimethylphenol | <0.34 | | 0.34 | 0.13 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Hexachlorobutadiene | <0.17 | | 0.17 | 0.054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Naphthalene | <0.034 | | 0.034 | 0.0053 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,4-Dichlorophenol | <0.34 | | 0.34 | 0.081 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 4-Chloroaniline | <0.69 | | 0.69 | 0.16 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,4,6-Trichlorophenol | <0.34 | | 0.34 | 0.12 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,4,5-Trichlorophenol | <0.34 | | 0.34 | 0.078 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Hexachlorocyclopentadiene | <0.69 | | 0.69 | 0.20 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2-Methylnaphthalene | <0.069 | | 0.069 | 0.0063 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2-Nitroaniline | <0.17 | | 0.17 | 0.046 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2-Chloronaphthalene | <0.17 | | 0.17 | 0.038 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 4-Chloro-3-methylphenol | <0.34 | | 0.34 | 0.12 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,6-Dinitrotoluene | <0.17 | | 0.17 | 0.067 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2-Nitrophenol | <0.34 | | 0.34 | 0.081 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 3-Nitroaniline | <0.34 | | 0.34 | 0.11 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Dimethyl phthalate | <0.17 | | 0.17 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,4-Dinitrophenol | <0.69 | | 0.69 | 0.60 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Acenaphthylene | <0.034 | | 0.034 | 0.0045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,4-Dinitrotoluene | <0.17 | | 0.17 | 0.054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Acenaphthene | <0.034 | | 0.034 | 0.0062 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Dibenzofuran | <0.17 | | 0.17 | 0.040 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 4-Nitrophenol | <0.69 | | 0.69 | 0.33 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Fluorene | <0.034 | | 0.034 | 0.0048 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 4-Nitroaniline | <0.34 | | 0.34 | 0.14 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 4-Bromophenyl phenyl ether | <0.17 | | 0.17 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Hexachlorobenzene | <0.069 | | 0.069 | 0.0079 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Diethyl phthalate | <0.17 | | 0.17 | 0.058 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 4-Chlorophenyl phenyl ether | <0.17 | | 0.17 | 0.040 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Pentachlorophenol | <0.69 | | 0.69 | 0.55 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| N-Nitrosodiphenylamine | <0.17 | | 0.17 | 0.040 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 4,6-Dinitro-2-methylphenol | <0.69 | | 0.69 | 0.28 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Phenanthrene | 0.016 | J | 0.034 | 0.0048 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Anthracene | <0.034 | | 0.034 | 0.0057 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Carbazole | <0.17 | | 0.17 | 0.086 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Di-n-butyl phthalate | <0.17 | | 0.17 | 0.052 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Fluoranthene | 0.026 | J | 0.034 | 0.0064 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Pyrene | 0.026 | J | 0.034 | 0.0068 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Butyl benzyl phthalate | <0.17 | | 0.17 | 0.065 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Benzo[a]anthracene | 0.014 | J | 0.034 | 0.0046 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

Client Sample ID: 2604A-12-B01 (0-1)

Lab Sample ID: 500-140307-11

Date Collected: 01/30/18 12:20

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 93.5

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|--------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Chrysene | 0.023 | J | 0.034 | 0.0093 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 3,3'-Dichlorobenzidine | <0.17 | | 0.17 | 0.048 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Bis(2-ethylhexyl) phthalate | <0.17 | | 0.17 | 0.063 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Di-n-octyl phthalate | <0.17 | | 0.17 | 0.056 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Benzo[b]fluoranthene | 0.022 | J | 0.034 | 0.0074 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Benzo[k]fluoranthene | 0.011 | J | 0.034 | 0.010 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Benzo[a]pyrene | 0.015 | J | 0.034 | 0.0066 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.013 | J | 0.034 | 0.0089 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Dibenz(a,h)anthracene | <0.034 | | 0.034 | 0.0066 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Benzo[g,h,i]perylene | 0.016 | J | 0.034 | 0.011 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 3 & 4 Methylphenol | <0.17 | | 0.17 | 0.057 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 18:21 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorophenol | 93 | | 46 - 133 | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Phenol-d5 | 83 | | 46 - 125 | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Nitrobenzene-d5 | 75 | | 41 - 120 | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2-Fluorobiphenyl | 78 | | 44 - 121 | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| 2,4,6-Tribromophenol | 64 | | 25 - 139 | 01/31/18 08:30 | 01/31/18 18:21 | 1 |
| Terphenyl-d14 | 83 | | 35 - 160 | 01/31/18 08:30 | 01/31/18 18:21 | 1 |

Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|---------------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Antimony | <1.0 | | 1.0 | 0.20 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Arsenic | 5.8 | | 0.52 | 0.18 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Barium | 15 | | 0.52 | 0.059 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Beryllium | 0.40 | | 0.21 | 0.049 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Boron | 16 | B | 2.6 | 0.24 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Cadmium | 0.057 | J | 0.10 | 0.019 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Calcium | 150000 | B | 100 | 18 | mg/Kg | ☼ | 02/01/18 06:59 | 02/02/18 15:00 | 10 |
| Chromium | 8.1 | | 0.52 | 0.26 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Cobalt | 5.6 | | 0.26 | 0.068 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Copper | 10 | | 0.52 | 0.15 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Iron | 9900 | | 10 | 5.4 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Lead | 13 | B | 0.26 | 0.12 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Magnesium | 88000 | | 52 | 26 | mg/Kg | ☼ | 02/01/18 06:59 | 02/02/18 15:00 | 10 |
| Manganese | 250 | | 0.52 | 0.075 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Nickel | 14 | | 0.52 | 0.15 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Potassium | 2300 | | 26 | 9.2 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Selenium | <0.52 | | 0.52 | 0.31 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Silver | <0.26 | | 0.26 | 0.067 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Sodium | 240 | | 52 | 7.7 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Thallium | <0.52 | | 0.52 | 0.26 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Vanadium | 7.8 | | 0.26 | 0.061 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |
| Zinc | 24 | | 1.0 | 0.46 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:48 | 1 |

Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|-------------|------------|--------|--------|------|---|----------------|----------------|---------|
| Barium | 0.18 | J | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Beryllium | <0.0040 | | 0.0040 | 0.0040 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Boron | 0.14 | J B | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

Client Sample ID: 2604A-12-B01 (0-1)

Lab Sample ID: 500-140307-11

Date Collected: 01/30/18 12:20

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 93.5

Method: 6010B - Metals (ICP) - TCLP (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|--------------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Cadmium | <0.0050 | | 0.0050 | 0.0020 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Chromium | <0.025 | | 0.025 | 0.010 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Cobalt | 0.043 | | 0.025 | 0.010 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Iron | 0.20 | J | 0.40 | 0.20 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Lead | <0.0075 | | 0.0075 | 0.0075 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Manganese | 1.3 | | 0.025 | 0.010 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Nickel | 0.037 | | 0.025 | 0.010 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Selenium | <0.050 | | 0.050 | 0.020 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Silver | <0.025 | | 0.025 | 0.010 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |
| Zinc | 0.024 | J | 0.50 | 0.020 | mg/L | | 02/01/18 08:40 | 02/01/18 22:56 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|--------------|-----------|-------|-------|------|---|----------------|----------------|---------|
| Manganese | 0.019 | J | 0.025 | 0.010 | mg/L | | 02/01/18 14:17 | 02/02/18 17:41 | 1 |

Method: 6020A - Metals (ICP/MS) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Antimony | <0.0060 | | 0.0060 | 0.0060 | mg/L | | 02/01/18 08:40 | 02/01/18 18:04 | 1 |
| Thallium | <0.0020 | | 0.0020 | 0.0020 | mg/L | | 02/01/18 08:40 | 02/01/18 18:04 | 1 |

Method: 7470A - TCLP Mercury - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|---------|------|---|----------------|----------------|---------|
| Mercury | <0.00020 | | 0.00020 | 0.00020 | mg/L | | 02/01/18 11:10 | 02/02/18 10:09 | 1 |

Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|--------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.015 | J | 0.016 | 0.0053 | mg/Kg | ☼ | 01/31/18 14:45 | 02/01/18 09:02 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|------------|-----------|------|------|------|---|----------|----------------|---------|
| pH | 8.3 | | 0.20 | 0.20 | SU | | | 02/02/18 13:34 | 1 |

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

Qualifiers

GC/MS VOA

| 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. |
| * | LCS or LCSD is outside acceptance limits. |

GC/MS Semi VOA

| 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. |

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. |
| B | Compound was found in the blank and sample. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | 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: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-6

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 | 04-30-18 |

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

| Analysis Method | Prep Method | Matrix | Analyte |
|-----------------|-------------|--------|----------------------------|
| 6020A | 3010A | Solid | Antimony |
| 6020A | 3010A | Solid | Thallium |
| 8260B | 5035 | Solid | 1,3-Dichloropropene, Total |
| 9045D | | Solid | pH |
| Moisture | | Solid | Percent Moisture |
| Moisture | | Solid | Percent Solids |

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140307-6

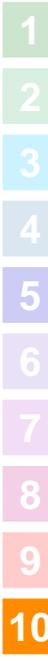
Login Number: 140307

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

| Question | Answer | Comment |
|--|--------|----------|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.8, 4.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |





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: Cal-Sag Greenway Bike Trail - East End Office Phone Number, if available: _____

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

13201 block of I-57 (ISGS #2604A-13)

City: Blue Island State: IL Zip Code: 60406

County: Cook Township: Calumet

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

Latitude: 41.65497 Longitude: -87.66160

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS Map Interpolation Photo Interpolation Survey Other

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

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: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Peterson

Contact: Tyler Peterson

Email, if available: Tyler.Peterson@illinois.gov

Email, if available: Tyler.Peterson@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: Cal-Sag Greenway Bike Trail - East End

Latitude: 41.65497 Longitude: -87.66160

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 2604A-13-B01 was sampled within the construction zone adjacent to ISGS #2604A-13 (Bridge). Refer to PSI Report for ISGS #2604A-13 (Bridge) including Table 4-3, and Figure 4-3.

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

See attached data summary table and associated laboratory data package J140307-5.

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

I, Neil J. Brown (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))

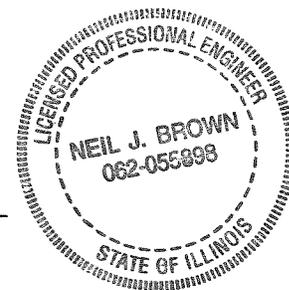
Company Name: Ecology and Environment, Inc.
 Street Address: 33 West Monroe Street
 City: Chicago State: IL Zip Code: 60603
 Phone: 312-578-9243

Neil J. Brown

Printed Name:

Neil J. Brown
 Licensed Professional Engineer or
 Licensed Professional Geologist Signature:

3/14/16
 Date:



Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #C-91-517-08; WorkOrder #38

Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

| SITE | ISGS #2604A-13 (Bridge) | Comparison Criteria | | | | | |
|-----------------------------|----------------------------|---------------------|---------------------|-------------------|-------------|------------------------|--------|
| | | MACs | | | TACO | | |
| BORING | 2604A-13-B01 | Most Stringent | Within an MSA | Within Chicago | Residential | Construction Worker | SCGIER |
| SAMPLE | 2604A-13-B01 (0-1) | | | | | | |
| MATRIX | Soil | | | | | | |
| DEPTH (feet) | 0-1 | | | | | | |
| pH | 8.5 | | | | | | |
| PID > Bkgd. | -- | | | | | | |
| VOCs (None Detected) | | | | | | | |
| SVOCs (mg/kg) | | | | | | | |
| Acenaphthylene | 0.0077 J | -- | -- | -- | -- | -- | -- |
| Anthracene | 0.016 J | 12,000 | -- | -- | 23,000 | 610,000 | -- |
| Benzo(a)anthracene | 0.064 | 0.9 | 1.8 | 1.1 | 1.8 | 170 | -- |
| Benzo(a)pyrene | 0.076 | 0.09 | 2.1 | 1.3 | 2.1 | 17 | -- |
| Benzo(b)fluoranthene | 0.12 | 0.9 | 2.1 | 1.5 | 2.1 | 170 | -- |
| Benzo(g,h,i)perylene | 0.062 | -- | -- | -- | -- | -- | -- |
| Benzo(k)fluoranthene | 0.036 | 9 | -- | -- | 9 | 1,700 | -- |
| Chrysene | 0.085 | 88 | -- | -- | 88 | 17,000 | -- |
| Dibenz(a,h)anthracene | 0.017 J | 0.09 | 0.42 | 0.2 | 0.42 | 17 | -- |
| Fluoranthene | 0.13 | 3,100 | -- | -- | 3,100 | 82,000 | -- |
| Fluorene | 0.0057 J | 560 | -- | -- | 3100 | 82,000 | -- |
| Indeno(1,2,3-cd)pyrene | 0.053 | 0.9 | 1.6 | 0.9 | 1.6 | 170 | -- |
| Phenanthrene | 0.064 | -- | -- | -- | -- | -- | -- |
| Pyrene | 0.11 | 2,300 | -- | -- | 2,300 | 61,000 | -- |
| Inorganics (mg/kg) | | | | | | | |
| Arsenic | 4.3 | 11.3 | 13 | -- | 13 | 61 | -- |
| Barium | 31 | 1,500 | -- | -- | 5,500 | 14,000 | -- |
| Beryllium | 0.43 | 22 | -- | -- | 160 | 410 | -- |
| Cadmium | 0.16 | 5.2 | -- | -- | 78 | 200 | -- |
| Calcium | 150,000 | -- | -- | -- | -- | -- | -- |
| Chromium | 10 | 21 | -- | -- | 230 | 690 | -- |
| Cobalt | 6.7 | 20 | -- | -- | 4,700 | 12,000 | -- |
| Copper | 17 | 2,900 | -- | -- | 2,900 | 8,200 | -- |
| Iron | 11,000 | 15,000 | 15,900 | -- | -- | -- | -- |
| Lead | 84 | 107 | -- | -- | 400 | 700 | -- |
| Magnesium | 49,000 | 325,000 | -- | -- | -- | 730,000 | -- |
| Manganese | 270 | 630 | 636 | -- | 1,600 | 4,100 | -- |
| Mercury | 0.020 | 0.89 | -- | -- | 10 | 0.1 | -- |
| Nickel | 16 | 100 | -- | -- | 1,600 | 4,100 | -- |
| Potassium | 2,300 | -- | -- | -- | -- | -- | -- |
| Sodium | 470 | -- | -- | -- | -- | -- | -- |
| Vanadium | 9.7 | 550 | -- | -- | 550 | 1,400 | -- |
| Zinc | 69 | 5,100 | -- | -- | 23,000 | 61,000 | -- |
| TCLP Metals (mg/L) | | | | | | | |
| Barium | 0.25 J | -- | -- | -- | -- | -- | 2 |
| Cadmium | 0.0021 J | -- | -- | -- | -- | -- | 0.005 |
| Cobalt | 0.059 | -- | -- | -- | -- | -- | 1 |
| Lead | 0.016 L | -- | -- | -- | -- | -- | 0.0075 |
| Manganese | 1.9 L | -- | -- | -- | -- | -- | 0.15 |
| Nickel | 0.044 | -- | -- | -- | -- | -- | 0.1 |
| Zinc | 0.15 J | -- | -- | -- | -- | -- | 5 |
| SPLP Metals (mg/L) | | | | | | | |
| Lead | 0.041 L | -- | -- | -- | -- | -- | 0.0075 |
| Manganese | 0.10 | -- | -- | -- | -- | -- | 0.15 |

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: 500-140307-5
Client Project/Site: IDOT - 176-001-WO038

For:
Ecology and Environment, Inc.
33 West Monroe St.
Suite 1410
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:
2/6/2018 1:07:23 PM

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

LINKS

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results through
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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

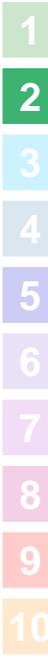


Table of Contents

| | |
|---------------------------------|----|
| Cover Page | 1 |
| Table of Contents | 2 |
| Case Narrative | 3 |
| Detection Summary | 4 |
| Sample Summary | 5 |
| Client Sample Results | 6 |
| Definitions | 10 |
| Certification Summary | 11 |
| Chain of Custody | 12 |
| Receipt Checklists | 13 |

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

Job ID: 500-140307-5

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-140307-5

Receipt

The samples were received on 1/30/2018 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8° C and 4.3° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for 418739 and 418563 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

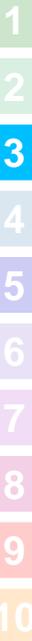
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

Client Sample ID: 2604A-13-B01 (0-1)

Lab Sample ID: 500-140307-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|--------|-------|---------|---|--------|-----------|
| Acenaphthylene | 0.0077 | J | 0.035 | 0.0047 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.0057 | J | 0.035 | 0.0050 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.064 | | 0.035 | 0.0049 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 0.016 | J | 0.035 | 0.0059 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.13 | | 0.035 | 0.0065 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.11 | | 0.035 | 0.0070 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 0.064 | | 0.035 | 0.0048 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.085 | | 0.035 | 0.0096 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.12 | | 0.035 | 0.0076 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.036 | | 0.035 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.076 | | 0.035 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.053 | | 0.035 | 0.0092 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.017 | J | 0.035 | 0.0068 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.062 | | 0.035 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 4.3 | | 0.52 | 0.18 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 31 | | 0.52 | 0.059 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.43 | | 0.21 | 0.048 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Boron | 16 | B | 2.6 | 0.24 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.16 | | 0.10 | 0.019 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 150000 | B | 100 | 18 | mg/Kg | 10 | ☼ | 6010B | Total/NA |
| Chromium | 10 | | 0.52 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 6.7 | | 0.26 | 0.068 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 17 | | 0.52 | 0.14 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 11000 | | 10 | 5.4 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 84 | B | 0.26 | 0.12 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 49000 | | 5.2 | 2.6 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 270 | | 0.52 | 0.075 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 16 | | 0.52 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 2300 | | 26 | 9.1 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 470 | | 52 | 7.6 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 9.7 | | 0.26 | 0.061 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 69 | | 1.0 | 0.45 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 0.25 | J | 0.50 | 0.050 | mg/L | 1 | | 6010B | TCLP |
| Boron | 0.16 | J B | 0.50 | 0.050 | mg/L | 1 | | 6010B | TCLP |
| Cadmium | 0.0021 | J | 0.0050 | 0.0020 | mg/L | 1 | | 6010B | TCLP |
| Cobalt | 0.059 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Lead | 0.016 | | 0.0075 | 0.0075 | mg/L | 1 | | 6010B | TCLP |
| Manganese | 1.9 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Nickel | 0.044 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Zinc | 0.15 | J | 0.50 | 0.020 | mg/L | 1 | | 6010B | TCLP |
| Lead | 0.041 | | 0.0075 | 0.0075 | mg/L | 1 | | 6010B | SPLP East |
| Manganese | 0.10 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | SPLP East |
| Mercury | 0.020 | | 0.019 | 0.0062 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 8.5 | | 0.20 | 0.20 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Sample Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|--------------------|--------|----------------|----------------|
| 500-140307-10 | 2604A-13-B01 (0-1) | Solid | 01/30/18 12:00 | 01/30/18 15:55 |

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

Client Sample ID: 2604A-13-B01 (0-1)

Lab Sample ID: 500-140307-10

Date Collected: 01/30/18 12:00

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 89.4

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|---------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acetone | <0.016 | | 0.016 | 0.0068 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Benzene | <0.0016 | | 0.0016 | 0.00040 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Bromodichloromethane | <0.0016 | | 0.0016 | 0.00032 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Bromoform | <0.0016 | | 0.0016 | 0.00046 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Bromomethane | <0.0039 | | 0.0039 | 0.0015 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 2-Butanone (MEK) | <0.0039 | | 0.0039 | 0.0017 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Carbon disulfide | <0.0039 | | 0.0039 | 0.00081 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Carbon tetrachloride | <0.0016 | | 0.0016 | 0.00045 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Chlorobenzene | <0.0016 | | 0.0016 | 0.00058 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Chloroethane | <0.0039 | | 0.0039 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Chloroform | <0.0016 | | 0.0016 | 0.00054 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Chloromethane | <0.0039 | | 0.0039 | 0.0016 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| cis-1,2-Dichloroethene | <0.0016 | | 0.0016 | 0.00044 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| cis-1,3-Dichloropropene | <0.0016 | | 0.0016 | 0.00047 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Dibromochloromethane | <0.0016 | | 0.0016 | 0.00051 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,1-Dichloroethane | <0.0016 | | 0.0016 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,2-Dichloroethane | <0.0039 | | 0.0039 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,1-Dichloroethene | <0.0016 | | 0.0016 | 0.00054 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,2-Dichloropropane | <0.0016 | | 0.0016 | 0.00040 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,3-Dichloropropane, Total | <0.0016 | | 0.0016 | 0.00055 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Ethylbenzene | <0.0016 | | 0.0016 | 0.00075 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 2-Hexanone | <0.0039 | | 0.0039 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Methylene Chloride | <0.0039 | | 0.0039 | 0.0015 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 4-Methyl-2-pentanone (MIBK) | <0.0039 | | 0.0039 | 0.0012 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Methyl tert-butyl ether | <0.0016 | | 0.0016 | 0.00046 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Styrene | <0.0016 | | 0.0016 | 0.00047 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.0016 | | 0.0016 | 0.00050 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Tetrachloroethene | <0.0016 | | 0.0016 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Toluene | <0.0016 | | 0.0016 | 0.00039 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| trans-1,2-Dichloroethene | <0.0016 | | 0.0016 | 0.00069 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| trans-1,3-Dichloropropene | <0.0016 | | 0.0016 | 0.00055 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,1,1-Trichloroethane | <0.0016 | | 0.0016 | 0.00052 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,1,2-Trichloroethane | <0.0016 | | 0.0016 | 0.00067 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Trichloroethene | <0.0016 | | 0.0016 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Vinyl acetate | <0.0039 | | 0.0039 | 0.0014 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Vinyl chloride | <0.0016 | | 0.0016 | 0.00069 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Xylenes, Total | <0.0031 | | 0.0031 | 0.00050 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 15:17 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 86 | | 75 - 131 | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Dibromofluoromethane | 105 | | 75 - 126 | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 86 | | 70 - 134 | 01/30/18 17:52 | 02/01/18 15:17 | 1 |
| Toluene-d8 (Surr) | 94 | | 75 - 124 | 01/30/18 17:52 | 02/01/18 15:17 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Phenol | <0.18 | | 0.18 | 0.078 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Bis(2-chloroethyl)ether | <0.18 | | 0.18 | 0.053 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 1,3-Dichlorobenzene | <0.18 | | 0.18 | 0.040 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 1,4-Dichlorobenzene | <0.18 | | 0.18 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

Client Sample ID: 2604A-13-B01 (0-1)

Lab Sample ID: 500-140307-10

Date Collected: 01/30/18 12:00

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 89.4

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|---------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| 1,2-Dichlorobenzene | <0.18 | | 0.18 | 0.042 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2-Methylphenol | <0.18 | | 0.18 | 0.057 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,2'-oxybis[1-chloropropane] | <0.18 | | 0.18 | 0.041 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| N-Nitrosodi-n-propylamine | <0.071 | | 0.071 | 0.043 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Hexachloroethane | <0.18 | | 0.18 | 0.054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2-Chlorophenol | <0.18 | | 0.18 | 0.060 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Nitrobenzene | <0.035 | | 0.035 | 0.0088 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Bis(2-chloroethoxy)methane | <0.18 | | 0.18 | 0.036 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 1,2,4-Trichlorobenzene | <0.18 | | 0.18 | 0.038 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Isophorone | <0.18 | | 0.18 | 0.040 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,4-Dimethylphenol | <0.35 | | 0.35 | 0.13 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Hexachlorobutadiene | <0.18 | | 0.18 | 0.055 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Naphthalene | <0.035 | | 0.035 | 0.0054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,4-Dichlorophenol | <0.35 | | 0.35 | 0.084 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 4-Chloroaniline | <0.71 | | 0.71 | 0.17 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,4,6-Trichlorophenol | <0.35 | | 0.35 | 0.12 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,4,5-Trichlorophenol | <0.35 | | 0.35 | 0.081 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Hexachlorocyclopentadiene | <0.71 | | 0.71 | 0.20 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2-Methylnaphthalene | <0.071 | | 0.071 | 0.0065 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2-Nitroaniline | <0.18 | | 0.18 | 0.048 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2-Chloronaphthalene | <0.18 | | 0.18 | 0.039 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 4-Chloro-3-methylphenol | <0.35 | | 0.35 | 0.12 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,6-Dinitrotoluene | <0.18 | | 0.18 | 0.069 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2-Nitrophenol | <0.35 | | 0.35 | 0.083 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 3-Nitroaniline | <0.35 | | 0.35 | 0.11 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Dimethyl phthalate | <0.18 | | 0.18 | 0.046 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,4-Dinitrophenol | <0.71 | | 0.71 | 0.62 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Acenaphthylene | 0.0077 | J | 0.035 | 0.0047 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,4-Dinitrotoluene | <0.18 | | 0.18 | 0.056 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Acenaphthene | <0.035 | | 0.035 | 0.0063 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Dibenzofuran | <0.18 | | 0.18 | 0.041 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 4-Nitrophenol | <0.71 | | 0.71 | 0.34 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Fluorene | 0.0057 | J | 0.035 | 0.0050 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 4-Nitroaniline | <0.35 | | 0.35 | 0.15 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 4-Bromophenyl phenyl ether | <0.18 | | 0.18 | 0.047 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Hexachlorobenzene | <0.071 | | 0.071 | 0.0082 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Diethyl phthalate | <0.18 | | 0.18 | 0.060 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 4-Chlorophenyl phenyl ether | <0.18 | | 0.18 | 0.041 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Pentachlorophenol | <0.71 | | 0.71 | 0.57 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| N-Nitrosodiphenylamine | <0.18 | | 0.18 | 0.042 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 4,6-Dinitro-2-methylphenol | <0.71 | | 0.71 | 0.28 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Phenanthrene | 0.064 | | 0.035 | 0.0049 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Anthracene | 0.016 | J | 0.035 | 0.0059 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Carbazole | <0.18 | | 0.18 | 0.088 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Di-n-butyl phthalate | <0.18 | | 0.18 | 0.054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Fluoranthene | 0.13 | | 0.035 | 0.0065 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Pyrene | 0.11 | | 0.035 | 0.0070 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Butyl benzyl phthalate | <0.18 | | 0.18 | 0.067 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Benzo[a]anthracene | 0.064 | | 0.035 | 0.0048 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

Client Sample ID: 2604A-13-B01 (0-1)

Lab Sample ID: 500-140307-10

Date Collected: 01/30/18 12:00

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 89.4

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|--------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Chrysene | 0.085 | | 0.035 | 0.0096 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 3,3'-Dichlorobenzidine | <0.18 | | 0.18 | 0.049 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Bis(2-ethylhexyl) phthalate | <0.18 | | 0.18 | 0.065 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Di-n-octyl phthalate | <0.18 | | 0.18 | 0.058 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Benzo[b]fluoranthene | 0.12 | | 0.035 | 0.0076 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Benzo[k]fluoranthene | 0.036 | | 0.035 | 0.010 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Benzo[a]pyrene | 0.076 | | 0.035 | 0.0068 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.053 | | 0.035 | 0.0092 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Dibenz(a,h)anthracene | 0.017 | J | 0.035 | 0.0068 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Benzo[g,h,i]perylene | 0.062 | | 0.035 | 0.011 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 3 & 4 Methylphenol | <0.18 | | 0.18 | 0.059 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:56 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorophenol | 83 | | 46 - 133 | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Phenol-d5 | 74 | | 46 - 125 | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Nitrobenzene-d5 | 68 | | 41 - 120 | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2-Fluorobiphenyl | 73 | | 44 - 121 | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| 2,4,6-Tribromophenol | 77 | | 25 - 139 | 01/31/18 08:30 | 01/31/18 17:56 | 1 |
| Terphenyl-d14 | 82 | | 35 - 160 | 01/31/18 08:30 | 01/31/18 17:56 | 1 |

Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|---------------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Antimony | <1.0 | | 1.0 | 0.20 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Arsenic | 4.3 | | 0.52 | 0.18 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Barium | 31 | | 0.52 | 0.059 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Beryllium | 0.43 | | 0.21 | 0.048 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Boron | 16 | B | 2.6 | 0.24 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Cadmium | 0.16 | | 0.10 | 0.019 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Calcium | 150000 | B | 100 | 18 | mg/Kg | ☼ | 02/01/18 06:59 | 02/02/18 14:56 | 10 |
| Chromium | 10 | | 0.52 | 0.26 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Cobalt | 6.7 | | 0.26 | 0.068 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Copper | 17 | | 0.52 | 0.14 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Iron | 11000 | | 10 | 5.4 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Lead | 84 | B | 0.26 | 0.12 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Magnesium | 49000 | | 5.2 | 2.6 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Manganese | 270 | | 0.52 | 0.075 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Nickel | 16 | | 0.52 | 0.15 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Potassium | 2300 | | 26 | 9.1 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Selenium | <0.52 | | 0.52 | 0.30 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Silver | <0.26 | | 0.26 | 0.067 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Sodium | 470 | | 52 | 7.6 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Thallium | <0.52 | | 0.52 | 0.26 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Vanadium | 9.7 | | 0.26 | 0.061 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |
| Zinc | 69 | | 1.0 | 0.45 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:43 | 1 |

Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|-------------|------------|--------|--------|------|---|----------------|----------------|---------|
| Barium | 0.25 | J | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Beryllium | <0.0040 | | 0.0040 | 0.0040 | mg/L | | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Boron | 0.16 | J B | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:52 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

Client Sample ID: 2604A-13-B01 (0-1)

Lab Sample ID: 500-140307-10

Date Collected: 01/30/18 12:00

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 89.4

Method: 6010B - Metals (ICP) - TCLP (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|---------------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Cadmium | 0.0021 | J | 0.0050 | 0.0020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Chromium | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Cobalt | 0.059 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Iron | <0.40 | | 0.40 | 0.20 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Lead | 0.016 | | 0.0075 | 0.0075 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Manganese | 1.9 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Nickel | 0.044 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Selenium | <0.050 | | 0.050 | 0.020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Silver | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |
| Zinc | 0.15 | J | 0.50 | 0.020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:52 | 1 |

Method: 6010B - SPLP Metals - SPLP East

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|--------------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Lead | 0.041 | | 0.0075 | 0.0075 | mg/L | - | 02/01/18 14:17 | 02/02/18 17:37 | 1 |
| Manganese | 0.10 | | 0.025 | 0.010 | mg/L | - | 02/01/18 14:17 | 02/02/18 17:37 | 1 |

Method: 6020A - Metals (ICP/MS) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Antimony | <0.0060 | | 0.0060 | 0.0060 | mg/L | - | 02/01/18 08:40 | 02/01/18 18:03 | 1 |
| Thallium | <0.0020 | | 0.0020 | 0.0020 | mg/L | - | 02/01/18 08:40 | 02/01/18 18:03 | 1 |

Method: 7470A - TCLP Mercury - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|---------|------|---|----------------|----------------|---------|
| Mercury | <0.00020 | | 0.00020 | 0.00020 | mg/L | - | 02/01/18 11:10 | 02/02/18 10:07 | 1 |

Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.020 | | 0.019 | 0.0062 | mg/Kg | ☼ | 01/31/18 14:45 | 02/01/18 09:00 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|------------|-----------|------|------|------|---|----------|----------------|---------|
| pH | 8.5 | | 0.20 | 0.20 | SU | - | | 02/02/18 13:32 | 1 |

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|---|
| * | LCS or LCSD is outside acceptance limits. |

GC/MS Semi VOA

| 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. |

Metals

| Qualifier | Qualifier Description |
|-----------|--|
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | 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: Ecology and Environment, Inc.
 Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-5

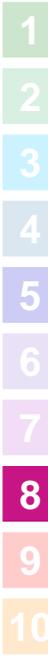
Laboratory: TestAmerica Chicago

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 | 04-30-18 |

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

| Analysis Method | Prep Method | Matrix | Analyte |
|-----------------|-------------|--------|----------------------------|
| 6020A | 3010A | Solid | Antimony |
| 6020A | 3010A | Solid | Thallium |
| 8260B | 5035 | Solid | 1,3-Dichloropropene, Total |
| 9045D | | Solid | pH |
| Moisture | | Solid | Percent Moisture |
| Moisture | | Solid | Percent Solids |



Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140307-5

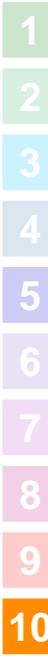
Login Number: 140307

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

| Question | Answer | Comment |
|---|--------|----------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.8, 4.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |





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: Cal-Sag Greenway Bike Trail - East End Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
13202 block of I-57 (ISGS #2604A-14)

City: Blue Island State: IL Zip Code: 60406

County: Cook Township: Calumet

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

Latitude: 41.65450 Longitude: -87.66110

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS Map Interpolation Photo Interpolation Survey Other

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

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: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Peterson

Contact: Tyler Peterson

Email, if available: Tyler.Peterson@illinois.gov

Email, if available: Tyler.Peterson@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: Cal-Sag Greenway Bike Trail - East End

Latitude: 41.65450 Longitude: -87.66110

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 2604A-14-B01 was sampled within the construction zone adjacent to ISGS #2604A-14 (Vacant Land). Refer to PSI Report for ISGS #2604A-14 (Vacant Land) including Table 4-3, and Figure 4-3.

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

See attached data summary table and associated laboratory data package J140307-4.

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

I, Neil J. Brown (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: Ecology and Environment, Inc.
 Street Address: 33 West Monroe Street
 City: Chicago State: IL Zip Code: 60603
 Phone: 312-578-9243

Neil J. Brown

Printed Name:

Neil J. Brown
 Licensed Professional Engineer or
 Licensed Professional Geologist Signature:

3/14/18 ^{*NSB*} *3/14/18*
 Date:



Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #C-91-517-08; WorkOrder #38

Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in
Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

| SITE | ISGS #2604A-14 (Vacant Land) | Comparison Criteria | | | | | |
|-----------------------------|---------------------------------|---------------------|---------------------|-------------------|-------------|------------------------|--------|
| | | MACs | | | TACO | | |
| BORING | 2604A-14-B01 | Most Stringent | Within an MSA | Within Chicago | Residential | Construction Worker | SCGIER |
| SAMPLE | 2604A-14-B01 (0-1) | | | | | | |
| MATRIX | Soil | | | | | | |
| DEPTH (feet) | 0-1 | | | | | | |
| pH | 7.9 | | | | | | |
| PID > Bkgd. | -- | | | | | | |
| VOCs (None Detected) | | | | | | | |
| SVOCs (mg/kg) | | | | | | | |
| 2-Methylnaphthalene | 0.0080 J | -- | -- | -- | -- | -- | -- |
| Acenaphthylene | 0.0082 J | -- | -- | -- | -- | -- | -- |
| Anthracene | 0.012 J | 12,000 | -- | -- | 23,000 | 610,000 | -- |
| Benzo(a)anthracene | 0.041 | 0.9 | 1.8 | 1.1 | 1.8 | 170 | -- |
| Benzo(a)pyrene | 0.050 | 0.09 | 2.1 | 1.3 | 2.1 | 17 | -- |
| Benzo(b)fluoranthene | 0.073 | 0.9 | 2.1 | 1.5 | 2.1 | 170 | -- |
| Benzo(g,h,i)perylene | 0.054 | -- | -- | -- | -- | -- | -- |
| Benzo(k)fluoranthene | 0.024 J | 9 | -- | -- | 9 | 1,700 | -- |
| Chrysene | 0.066 | 88 | -- | -- | 88 | 17,000 | -- |
| Dibenz(a,h)anthracene | 0.012 J | 0.09 | 0.42 | 0.2 | 0.42 | 17 | -- |
| Fluoranthene | 0.089 | 3,100 | -- | -- | 3,100 | 82,000 | -- |
| Fluorene | 0.0059 J | 560 | -- | -- | 3100 | 82,000 | -- |
| Indeno(1,2,3-cd)pyrene | 0.032 J | 0.9 | 1.6 | 0.9 | 1.6 | 170 | -- |
| Naphthalene | 0.0060 J | 1.8 | -- | -- | 170 | 1.8 | -- |
| Phenanthrene | 0.066 | -- | -- | -- | -- | -- | -- |
| Pyrene | 0.084 | 2,300 | -- | -- | 2,300 | 61,000 | -- |
| Inorganics (mg/kg) | | | | | | | |
| Antimony | 0.26 J | 5 | -- | -- | 31 | 82 | -- |
| Arsenic | 4.5 | 11.3 | 13 | -- | 13 | 61 | -- |
| Barium | 44 | 1,500 | -- | -- | 5,500 | 14,000 | -- |
| Beryllium | 0.76 | 22 | -- | -- | 160 | 410 | -- |
| Cadmium | 0.090 J | 5.2 | -- | -- | 78 | 200 | -- |
| Calcium | 81,000 | -- | -- | -- | -- | -- | -- |
| Chromium | 19 | 21 | -- | -- | 230 | 690 | -- |
| Cobalt | 12 | 20 | -- | -- | 4,700 | 12,000 | -- |
| Copper | 20 | 2,900 | -- | -- | 2,900 | 8,200 | -- |
| Iron | 19,000 †m | 15,000 | 15,900 | -- | -- | -- | -- |
| Lead | 19 | 107 | -- | -- | 400 | 700 | -- |
| Magnesium | 23,000 | 325,000 | -- | -- | -- | 730,000 | -- |
| Manganese | 320 | 630 | 636 | -- | 1,600 | 4,100 | -- |
| Mercury | 0.027 | 0.89 | -- | -- | 10 | 0.1 | -- |
| Nickel | 31 | 100 | -- | -- | 1,600 | 4,100 | -- |
| Potassium | 3,600 | -- | -- | -- | -- | -- | -- |
| Selenium | 0.35 J | 1.3 | -- | -- | 390 | 1,000 | -- |
| Sodium | 170 | -- | -- | -- | -- | -- | -- |
| Thallium | 0.36 J | 2.6 | -- | -- | 6.3 | 160 | -- |
| Vanadium | 20 | 550 | -- | -- | 550 | 1,400 | -- |
| Zinc | 57 | 5,100 | -- | -- | 23,000 | 61,000 | -- |
| TCLP Metals (mg/L) | | | | | | | |
| Barium | 0.45 J | -- | -- | -- | -- | -- | 2 |
| Iron | 0.26 J | -- | -- | -- | -- | -- | 5 |
| Manganese | 1.7 L | -- | -- | -- | -- | -- | 0.15 |
| Nickel | 0.011 J | -- | -- | -- | -- | -- | 0.1 |
| SPLP Metals (mg/L) | | | | | | | |
| Manganese | 0.30 L | -- | -- | -- | -- | -- | 0.15 |

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: 500-140307-4
Client Project/Site: IDOT - 176-001-WO038

For:
Ecology and Environment, Inc.
33 West Monroe St.
Suite 1410
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:
2/6/2018 1:06:55 PM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

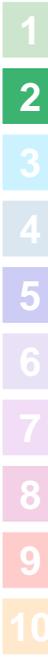


Table of Contents

| | |
|---------------------------------|----|
| Cover Page | 1 |
| Table of Contents | 2 |
| Case Narrative | 3 |
| Detection Summary | 4 |
| Sample Summary | 5 |
| Client Sample Results | 6 |
| Definitions | 10 |
| Certification Summary | 11 |
| Chain of Custody | 12 |
| Receipt Checklists | 13 |

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

Job ID: 500-140307-4

Laboratory: TestAmerica Chicago

Narrative

**Job Narrative
500-140307-4**

Receipt

The samples were received on 1/30/2018 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8° C and 4.3° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for 418739 and 418563 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

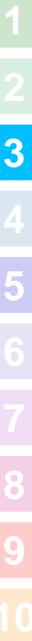
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

Client Sample ID: 2604A-14-B01 (0-1)

Lab Sample ID: 500-140307-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|--------|-------|---------|---|--------|-----------|
| Naphthalene | 0.0060 | J | 0.038 | 0.0059 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 0.0080 | J | 0.078 | 0.0071 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 0.0082 | J | 0.038 | 0.0051 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 0.0059 | J | 0.038 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 0.066 | | 0.038 | 0.0054 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 0.012 | J | 0.038 | 0.0064 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 0.089 | | 0.038 | 0.0071 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 0.084 | | 0.038 | 0.0077 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 0.041 | | 0.038 | 0.0052 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 0.066 | | 0.038 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.073 | | 0.038 | 0.0083 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 0.024 | J | 0.038 | 0.011 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 0.050 | | 0.038 | 0.0075 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.032 | J | 0.038 | 0.010 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 0.012 | J | 0.038 | 0.0074 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 0.054 | | 0.038 | 0.012 | mg/Kg | 1 | ☼ | 8270D | Total/NA |
| Antimony | 0.26 | J | 1.1 | 0.21 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Arsenic | 4.5 | | 0.55 | 0.19 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 44 | | 0.55 | 0.063 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Beryllium | 0.76 | | 0.22 | 0.052 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Boron | 17 | B | 2.8 | 0.26 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cadmium | 0.090 | J | 0.11 | 0.020 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Calcium | 81000 | B | 110 | 19 | mg/Kg | 10 | ☼ | 6010B | Total/NA |
| Chromium | 19 | | 0.55 | 0.27 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Cobalt | 12 | | 0.28 | 0.072 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Copper | 20 | | 0.55 | 0.15 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Iron | 19000 | | 11 | 5.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Lead | 19 | B | 0.28 | 0.13 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Magnesium | 23000 | | 5.5 | 2.7 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Manganese | 320 | | 0.55 | 0.080 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Nickel | 31 | | 0.55 | 0.16 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Potassium | 3600 | | 28 | 9.8 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Selenium | 0.35 | J | 0.55 | 0.32 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Sodium | 170 | | 55 | 8.2 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Thallium | 0.36 | J | 0.55 | 0.28 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Vanadium | 20 | | 0.28 | 0.065 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Zinc | 57 | | 1.1 | 0.48 | mg/Kg | 1 | ☼ | 6010B | Total/NA |
| Barium | 0.45 | J | 0.50 | 0.050 | mg/L | 1 | | 6010B | TCLP |
| Boron | 0.084 | J B | 0.50 | 0.050 | mg/L | 1 | | 6010B | TCLP |
| Iron | 0.26 | J | 0.40 | 0.20 | mg/L | 1 | | 6010B | TCLP |
| Manganese | 1.7 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Nickel | 0.011 | J | 0.025 | 0.010 | mg/L | 1 | | 6010B | TCLP |
| Manganese | 0.30 | | 0.025 | 0.010 | mg/L | 1 | | 6010B | SPLP East |
| Mercury | 0.027 | | 0.019 | 0.0065 | mg/Kg | 1 | ☼ | 7471B | Total/NA |
| pH | 7.9 | | 0.20 | 0.20 | SU | 1 | | 9045D | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Sample Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|--------------------|--------|----------------|----------------|
| 500-140307-9 | 2604A-14-B01 (0-1) | Solid | 01/30/18 11:40 | 01/30/18 15:55 |

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

Client Sample ID: 2604A-14-B01 (0-1)

Lab Sample ID: 500-140307-9

Date Collected: 01/30/18 11:40

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 81.9

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|---------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acetone | <0.018 | | 0.018 | 0.0077 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Benzene | <0.0018 | | 0.0018 | 0.00045 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Bromodichloromethane | <0.0018 | | 0.0018 | 0.00036 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Bromoform | <0.0018 | | 0.0018 | 0.00051 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Bromomethane | <0.0044 | | 0.0044 | 0.0017 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 2-Butanone (MEK) | <0.0044 | | 0.0044 | 0.0020 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Carbon disulfide | <0.0044 | | 0.0044 | 0.00092 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Carbon tetrachloride | <0.0018 | | 0.0018 | 0.00051 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Chlorobenzene | <0.0018 | | 0.0018 | 0.00065 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Chloroethane | <0.0044 | | 0.0044 | 0.0013 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Chloroform | <0.0018 | | 0.0018 | 0.00061 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Chloromethane | <0.0044 | | 0.0044 | 0.0018 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| cis-1,2-Dichloroethene | <0.0018 | | 0.0018 | 0.00049 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| cis-1,3-Dichloropropene | <0.0018 | | 0.0018 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Dibromochloromethane | <0.0018 | | 0.0018 | 0.00058 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,1-Dichloroethane | <0.0018 | | 0.0018 | 0.00060 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,2-Dichloroethane | <0.0044 | | 0.0044 | 0.0014 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,1-Dichloroethene | <0.0018 | | 0.0018 | 0.00061 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,2-Dichloropropane | <0.0018 | | 0.0018 | 0.00046 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,3-Dichloropropane, Total | <0.0018 | | 0.0018 | 0.00062 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Ethylbenzene | <0.0018 | | 0.0018 | 0.00084 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 2-Hexanone | <0.0044 | | 0.0044 | 0.0014 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Methylene Chloride | <0.0044 | | 0.0044 | 0.0017 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | <0.0044 | | 0.0044 | 0.0013 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Methyl tert-butyl ether | <0.0018 | | 0.0018 | 0.00052 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Styrene | <0.0018 | | 0.0018 | 0.00053 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.0018 | | 0.0018 | 0.00056 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Tetrachloroethene | <0.0018 | | 0.0018 | 0.00060 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Toluene | <0.0018 | | 0.0018 | 0.00045 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| trans-1,2-Dichloroethene | <0.0018 | | 0.0018 | 0.00078 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| trans-1,3-Dichloropropene | <0.0018 | | 0.0018 | 0.00062 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,1,1-Trichloroethane | <0.0018 | | 0.0018 | 0.00059 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,1,2-Trichloroethane | <0.0018 | | 0.0018 | 0.00076 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Trichloroethene | <0.0018 | | 0.0018 | 0.00060 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Vinyl acetate | <0.0044 | | 0.0044 | 0.0015 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Vinyl chloride | <0.0018 | | 0.0018 | 0.00078 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Xylenes, Total | <0.0035 | | 0.0035 | 0.00056 | mg/Kg | ☼ | 01/30/18 17:52 | 02/01/18 14:51 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 84 | | 75 - 131 | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Dibromofluoromethane | 104 | | 75 - 126 | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 89 | | 70 - 134 | 01/30/18 17:52 | 02/01/18 14:51 | 1 |
| Toluene-d8 (Surr) | 94 | | 75 - 124 | 01/30/18 17:52 | 02/01/18 14:51 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Phenol | <0.19 | | 0.19 | 0.086 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Bis(2-chloroethyl)ether | <0.19 | | 0.19 | 0.058 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 1,3-Dichlorobenzene | <0.19 | | 0.19 | 0.043 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 1,4-Dichlorobenzene | <0.19 | | 0.19 | 0.049 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

Client Sample ID: 2604A-14-B01 (0-1)

Lab Sample ID: 500-140307-9

Date Collected: 01/30/18 11:40

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 81.9

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|---------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| 1,2-Dichlorobenzene | <0.19 | | 0.19 | 0.046 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2-Methylphenol | <0.19 | | 0.19 | 0.062 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,2'-oxybis[1-chloropropane] | <0.19 | | 0.19 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| N-Nitrosodi-n-propylamine | <0.078 | | 0.078 | 0.047 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Hexachloroethane | <0.19 | | 0.19 | 0.059 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2-Chlorophenol | <0.19 | | 0.19 | 0.066 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Nitrobenzene | <0.038 | | 0.038 | 0.0096 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Bis(2-chloroethoxy)methane | <0.19 | | 0.19 | 0.039 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 1,2,4-Trichlorobenzene | <0.19 | | 0.19 | 0.042 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Isophorone | <0.19 | | 0.19 | 0.043 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,4-Dimethylphenol | <0.38 | | 0.38 | 0.15 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Hexachlorobutadiene | <0.19 | | 0.19 | 0.061 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Naphthalene | 0.0060 | J | 0.038 | 0.0059 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,4-Dichlorophenol | <0.38 | | 0.38 | 0.092 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 4-Chloroaniline | <0.78 | | 0.78 | 0.18 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,4,6-Trichlorophenol | <0.38 | | 0.38 | 0.13 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,4,5-Trichlorophenol | <0.38 | | 0.38 | 0.088 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Hexachlorocyclopentadiene | <0.78 | | 0.78 | 0.22 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2-Methylnaphthalene | 0.0080 | J | 0.078 | 0.0071 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2-Nitroaniline | <0.19 | | 0.19 | 0.052 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2-Chloronaphthalene | <0.19 | | 0.19 | 0.043 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 4-Chloro-3-methylphenol | <0.38 | | 0.38 | 0.13 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,6-Dinitrotoluene | <0.19 | | 0.19 | 0.076 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2-Nitrophenol | <0.38 | | 0.38 | 0.091 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 3-Nitroaniline | <0.38 | | 0.38 | 0.12 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Dimethyl phthalate | <0.19 | | 0.19 | 0.050 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,4-Dinitrophenol | <0.78 | | 0.78 | 0.68 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Acenaphthylene | 0.0082 | J | 0.038 | 0.0051 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,4-Dinitrotoluene | <0.19 | | 0.19 | 0.061 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Acenaphthene | <0.038 | | 0.038 | 0.0069 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Dibenzofuran | <0.19 | | 0.19 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 4-Nitrophenol | <0.78 | | 0.78 | 0.37 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Fluorene | 0.0059 | J | 0.038 | 0.0054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 4-Nitroaniline | <0.38 | | 0.38 | 0.16 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 4-Bromophenyl phenyl ether | <0.19 | | 0.19 | 0.051 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Hexachlorobenzene | <0.078 | | 0.078 | 0.0089 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Diethyl phthalate | <0.19 | | 0.19 | 0.065 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 4-Chlorophenyl phenyl ether | <0.19 | | 0.19 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Pentachlorophenol | <0.78 | | 0.78 | 0.62 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| N-Nitrosodiphenylamine | <0.19 | | 0.19 | 0.045 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 4,6-Dinitro-2-methylphenol | <0.78 | | 0.78 | 0.31 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Phenanthrene | 0.066 | | 0.038 | 0.0054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Anthracene | 0.012 | J | 0.038 | 0.0064 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Carbazole | <0.19 | | 0.19 | 0.096 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Di-n-butyl phthalate | <0.19 | | 0.19 | 0.059 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Fluoranthene | 0.089 | | 0.038 | 0.0071 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Pyrene | 0.084 | | 0.038 | 0.0077 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Butyl benzyl phthalate | <0.19 | | 0.19 | 0.073 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Benzo[a]anthracene | 0.041 | | 0.038 | 0.0052 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

Client Sample ID: 2604A-14-B01 (0-1)

Lab Sample ID: 500-140307-9

Date Collected: 01/30/18 11:40

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 81.9

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|----------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Chrysene | 0.066 | | 0.038 | 0.011 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 3,3'-Dichlorobenzidine | <0.19 | | 0.19 | 0.054 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Bis(2-ethylhexyl) phthalate | <0.19 | | 0.19 | 0.070 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Di-n-octyl phthalate | <0.19 | | 0.19 | 0.063 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Benzo[b]fluoranthene | 0.073 | | 0.038 | 0.0083 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Benzo[k]fluoranthene | 0.024 J | | 0.038 | 0.011 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Benzo[a]pyrene | 0.050 | | 0.038 | 0.0075 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.032 J | | 0.038 | 0.010 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Dibenz(a,h)anthracene | 0.012 J | | 0.038 | 0.0074 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Benzo[g,h,i]perylene | 0.054 | | 0.038 | 0.012 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 3 & 4 Methylphenol | <0.19 | | 0.19 | 0.064 | mg/Kg | ☼ | 01/31/18 08:30 | 01/31/18 17:31 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorophenol | 83 | | 46 - 133 | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Phenol-d5 | 73 | | 46 - 125 | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Nitrobenzene-d5 | 65 | | 41 - 120 | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2-Fluorobiphenyl | 70 | | 44 - 121 | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| 2,4,6-Tribromophenol | 75 | | 25 - 139 | 01/31/18 08:30 | 01/31/18 17:31 | 1 |
| Terphenyl-d14 | 80 | | 35 - 160 | 01/31/18 08:30 | 01/31/18 17:31 | 1 |

Method: 6010B - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|----------------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Antimony | 0.26 J | | 1.1 | 0.21 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Arsenic | 4.5 | | 0.55 | 0.19 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Barium | 44 | | 0.55 | 0.063 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Beryllium | 0.76 | | 0.22 | 0.052 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Boron | 17 B | | 2.8 | 0.26 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Cadmium | 0.090 J | | 0.11 | 0.020 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Calcium | 81000 B | | 110 | 19 | mg/Kg | ☼ | 02/01/18 06:59 | 02/02/18 14:44 | 10 |
| Chromium | 19 | | 0.55 | 0.27 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Cobalt | 12 | | 0.28 | 0.072 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Copper | 20 | | 0.55 | 0.15 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Iron | 19000 | | 11 | 5.7 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Lead | 19 B | | 0.28 | 0.13 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Magnesium | 23000 | | 5.5 | 2.7 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Manganese | 320 | | 0.55 | 0.080 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Nickel | 31 | | 0.55 | 0.16 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Potassium | 3600 | | 28 | 9.8 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Selenium | 0.35 J | | 0.55 | 0.32 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Silver | <0.28 | | 0.28 | 0.071 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Sodium | 170 | | 55 | 8.2 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Thallium | 0.36 J | | 0.55 | 0.28 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Vanadium | 20 | | 0.28 | 0.065 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |
| Zinc | 57 | | 1.1 | 0.48 | mg/Kg | ☼ | 02/01/18 06:59 | 02/01/18 17:39 | 1 |

Method: 6010B - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|------------------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Barium | 0.45 J | | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Beryllium | <0.0040 | | 0.0040 | 0.0040 | mg/L | | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Boron | 0.084 J B | | 0.50 | 0.050 | mg/L | | 02/01/18 08:40 | 02/01/18 22:39 | 1 |

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

Client Sample ID: 2604A-14-B01 (0-1)

Lab Sample ID: 500-140307-9

Date Collected: 01/30/18 11:40

Matrix: Solid

Date Received: 01/30/18 15:55

Percent Solids: 81.9

Method: 6010B - Metals (ICP) - TCLP (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|--------------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Cadmium | <0.0050 | | 0.0050 | 0.0020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Chromium | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Cobalt | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Iron | 0.26 | J | 0.40 | 0.20 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Lead | <0.0075 | | 0.0075 | 0.0075 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Manganese | 1.7 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Nickel | 0.011 | J | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Selenium | <0.050 | | 0.050 | 0.020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Silver | <0.025 | | 0.025 | 0.010 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |
| Zinc | <0.50 | | 0.50 | 0.020 | mg/L | - | 02/01/18 08:40 | 02/01/18 22:39 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|-------------|-----------|-------|-------|------|---|----------------|----------------|---------|
| Manganese | 0.30 | | 0.025 | 0.010 | mg/L | - | 02/01/18 14:17 | 02/02/18 17:32 | 1 |

Method: 6020A - Metals (ICP/MS) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|--------|------|---|----------------|----------------|---------|
| Antimony | <0.0060 | | 0.0060 | 0.0060 | mg/L | - | 02/01/18 08:40 | 02/01/18 18:02 | 1 |
| Thallium | <0.0020 | | 0.0020 | 0.0020 | mg/L | - | 02/01/18 08:40 | 02/01/18 18:02 | 1 |

Method: 7470A - TCLP Mercury - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|---------|------|---|----------------|----------------|---------|
| Mercury | <0.00020 | | 0.00020 | 0.00020 | mg/L | - | 02/01/18 11:10 | 02/02/18 10:06 | 1 |

Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|--------------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.027 | | 0.019 | 0.0065 | mg/Kg | ☼ | 01/31/18 14:45 | 02/01/18 08:58 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|------------|-----------|------|------|------|---|----------|----------------|---------|
| pH | 7.9 | | 0.20 | 0.20 | SU | - | | 02/02/18 13:31 | 1 |

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|---|
| * | LCS or LCSD is outside acceptance limits. |

GC/MS Semi VOA

| 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. |

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. |
| B | Compound was found in the blank and sample. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | 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: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO038

TestAmerica Job ID: 500-140307-4

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 | 04-30-18 |

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

| Analysis Method | Prep Method | Matrix | Analyte |
|-----------------|-------------|--------|----------------------------|
| 6020A | 3010A | Solid | Antimony |
| 6020A | 3010A | Solid | Thallium |
| 8260B | 5035 | Solid | 1,3-Dichloropropene, Total |
| 9045D | | Solid | pH |
| Moisture | | Solid | Percent Moisture |
| Moisture | | Solid | Percent Solids |

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140307-4

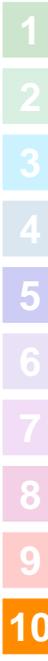
Login Number: 140307

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

| Question | Answer | Comment |
|--|--------|----------|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.8, 4.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |



COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

Revise Article 107.40(b) of the Standard Specifications to read:

“(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

- (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
- (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
- (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days.”

Revise Article 107.40(c) of the Standard Specifications to read:

“(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

- (1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

- (2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

- (3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13."

Revise Article 108.04(b) of the Standard Specifications to read:

"(b) No working day will be charged under the following conditions.

- (1) When adverse weather prevents work on the controlling item.
- (2) When job conditions due to recent weather prevent work on the controlling item.
- (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
- (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
- (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
- (6) When any condition over which the Contractor has no control prevents work on the controlling item."

Revise Article 109.09(f) of the Standard Specifications to read:

"(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited.”

Add the following to Section 109 of the Standard Specifications.

“109.13 Payment for Contract Delay. Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

| Contract Type | Cause of Delay | Length of Delay |
|-----------------|--|---|
| Working Days | Article 108.04(b)(3) or Article 108.04(b)(4) | No working days have been charged for two consecutive weeks. |
| Completion Date | Article 108.08(b)(1) or Article 108.08(b)(7) | The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08. |

Payment for each of the various costs will be according to the following.

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
 - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

| Original Contract Amount | Supervisory and Administrative Personnel |
|--|--|
| Up to \$5,000,000 | One Project Superintendent |
| Over \$ 5,000,000 - up to \$25,000,000 | One Project Manager, One Project Superintendent or Engineer, and One Clerk |
| Over \$25,000,000 - up to \$50,000,000 | One Project Manager, One Project Superintendent, One Engineer, and |

| | |
|-------------------|--|
| | One Clerk |
| Over \$50,000,000 | One Project Manager, Two Project Superintendents, One Engineer, and One Clerk |

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

When an extended traffic control adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

80384

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: 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: March 2, 2019

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 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 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, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform 20.00 % 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 enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents 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 a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. 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. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the 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. This means 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 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 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 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 the 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 it is otherwise eligible for award. If the Department determines 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 will also include a statement of reasons for the adverse 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 to cure the deficiency.

- (c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "DOT.DBE.UP@illinois.gov" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. 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 reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person 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 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 it 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 or 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 emailed to the Department at DOT.DBE.UP@illinois.gov.
- (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, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure 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 copies of DBE subcontracts to the Department upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (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) 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) The DBE is aware 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) 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 Contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the 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) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor 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 Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the 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 will 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 30 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement 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 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 may 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

DISPOSAL FEES (BDE)

Effective: November 1, 2018

Replace Articles 109.04(b)(5) – 109.04(b)(8) of the Standard Specifications with the following:

- “(5) Disposal Fees. When the extra work performed includes paying for disposal fees at a clean construction and demolition debris facility, an uncontaminated soil fill operation or a landfill, the Contractor shall receive, as administrative costs, an amount equal to five percent of the first \$10,000 and one percent of any amount over \$10,000 of the total approved costs of such fees.
- (6) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- (7) Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with itemized statements of the cost of such force account work. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor’s stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Itemized statements at the cost of force account work shall be detailed as follows.

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman. Payrolls shall be submitted to substantiate actual wages paid if so requested by the Engineer.
 - b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 - c. Quantities of materials, prices and extensions.
 - d. Transportation of materials.
 - e. Cost of property damage, liability and workmen’s compensation insurance premiums, unemployment insurance contributions, and social security tax.
- (8) Work Performed by an Approved Subcontractor. When extra work is performed by an approved subcontractor, the Contractor shall receive, as administrative costs, an amount equal to five percent of the total approved costs of such work with the minimum payment being \$100.

- (9) All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after receipt of the Central Bureau of Construction form "Extra Work Daily Report". If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Department is released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery."

80402

EMULSIFIED ASPHALTS (BDE)

Effective: August 1, 2019

Revise Article 1032.06 of the Standard Specifications to read:

“1032.06 Emulsified Asphalts. Emulsified asphalts will be accepted according to the current Bureau of Materials Policy Memorandum, “Emulsified Asphalt Acceptance Procedure”. These materials shall be homogeneous and shall show no separation of asphalt after thorough mixing, within 30 days after delivery, provided separation has not been caused by freezing. They shall coat the aggregate being used in the work to the satisfaction of the Engineer and shall be according to the following requirements.

- (a) Anionic Emulsified Asphalt. Anionic emulsified asphalts RS-1, RS-2, HFRS-2, SS-1h, and SS-1 shall be according to AASHTO M 140, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (b) Cationic Emulsified Asphalt. Cationic emulsified asphalts CRS-1, CRS-2, CSS-1h, and CSS-1 shall be according to AASHTO M 208, except as follows.
 - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
 - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (c) High Float Emulsion. High float emulsions HFE-90, HFE-150, and HFE-300 are medium setting and shall be according to the following table.

| Test | HFE-90 | HFE-150 | HFE-300 |
|--|-------------------------|-------------------|-------------------|
| Viscosity, Saybolt Furol, at 122 °F (50 °C), (AASHTO T 59), SFS ^{1/} | 50 min. | 50 min. | 50 min. |
| Sieve Test, No. 20 (850 µm), retained on sieve, (AASHTO T 59), % | 0.10 max. | 0.10 max. | 0.10 max. |
| Storage Stability Test, 1 day, (AASHTO T 59), % | 1 max. | 1 max. | 1 max. |
| Coating Test (All Grades), (AASHTO T 59), 3 minutes | stone coated thoroughly | | |
| Distillation Test, (AASHTO T 59): Residue from distillation test to 500 °F (260 °C), % Oil distillate by volume, % | 65 min. 7 max. | 65 min. 7 max. | 65 min. 7 max. |

| | | | |
|--|-----------|-----------|-----------|
| Characteristics of residue from distillation test to 500 °F (260 °C): Penetration at 77 °F (25 °C), (AASHTO T 49), 100 g, 5 sec, dmm | 90-150 | 150-300 | 300 min. |
| Float Test at 140 °F (60 °C), (AASHTO T 50), sec. | 1200 min. | 1200 min. | 1200 min. |

1/ The emulsion shall be pumpable.

- (d) Penetrating Emulsified Prime. Penetrating Emulsified Prime (PEP) shall be according to AASHTO T 59, except as follows.

| Test | Result |
|--|-----------|
| Viscosity, Saybolt Furol, at 77 °F (25 °C), SFS | 75 max. |
| Sieve test, retained on No. 20 (850 µm) sieve, % | 0.10 max. |
| Distillation to 500 °F (260 °C) residue, % | 38 min. |
| Oil distillate by volume, % | 4 max. |

The PEP shall be tested according to the current Bureau of Materials Illinois Laboratory Test Procedure (ILTP), "Sand Penetration Test of Penetrating Emulsified Prime (PEP)". The time of penetration shall be equal to or less than that of MC-30. The depth of penetration shall be equal to or greater than that of MC-30.

- (e) Delete this subparagraph.
- (f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts, e.g. SS-1hP, CSS-1hP, CRS-2P (formerly CRSP), CQS-1hP (formerly CSS-1h Latex Modified) and HFRS-2P (formerly HFP) shall be according to AASHTO M 316, except as follows.
- (1) The cement mixing test will be waived when the polymer modified emulsion is being used as a tack coat.
 - (2) CQS-1hP (formerly CSS-1h Latex Modified) emulsion for micro-surfacing treatments shall use latex as the modifier.
 - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show minimal to no white, milky colored substance and shall be a homogenous brown color throughout.
 - (4) The distillation for all polymer modified emulsions shall be performed according to AASHTO T 59, except the temperature shall be 374 ± 9 °F (190 ± 5 °C) to be held for a period of 15 minutes and measured using an ASTM 16F (16C) thermometer.
 - (5) The specified temperature for the Elastic Recovery test for all polymer modified emulsions shall be 50.0 ± 1.0 °F (10.0 ± 0.5 °C).

(6) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.

(g) Non-Tracking Emulsified Asphalt. Non-tracking emulsified asphalt NTEA (formerly SS-1vh) shall be according to the following.

| Test | Requirement |
|---|---------------|
| Saybolt Viscosity at 77 °F (25 °C), (AASHTO T 59), SFS | 20-100 |
| Storage Stability Test, 24 hr, (AASHTO T 59), % | 1 max. |
| Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), % | 50 min. |
| Sieve Test, No. 20 (850 µm), (AASHTO T 59), % | 0.3 max. |
| Tests on Residue from Evaporation | |
| Penetration at 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 49), dmm | 40 max. |
| Softening Point, (AASHTO T 53), °F (°C) | 135 (57) min. |
| Ash Content, (AASHTO T 111), % ^{1/} | 1 max. |

1/ The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent

The different grades are, in general, used for the following.

| Grade | Use |
|---|---|
| SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, NTEA (formerly SS-1vh) | Tack Coat |
| PEP | Prime Coat |
| RS-2, HFE-90, HFE-150, HFE-300, CRS-2P (formerly CRSP), HFRS-2P (formerly HFP), CRS-2, HFRS-2 | Bituminous Surface Treatment |
| CQS-1hP (formerly CSS-1h Latex Modified) | Micro-Surfacing Slurry Sealing Cape Seal" |

80415

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

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

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

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

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

“(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.”

80328

RAILROAD PROTECTIVE LIABILITY INSURANCE (5 and 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

| NAMED INSURED & ADDRESS | NUMBER & SPEED OF PASSENGER TRAINS | NUMBER & SPEED OF FREIGHT TRAINS |
|--|------------------------------------|----------------------------------|
| The Commuter Rail Division of the Regional Transportation Authority, a division of an Illinois municipal corporation, and its affiliated separate public corporation known as the Northeast Illinois Regional Commuter Railroad Corporation, both operating under the service mark Metra, as now exists or may hereafter be constituted or acquired, and the Regional Transportation Authority, an Illinois municipal corporation. | 91 Trains @ 60 mph | 18 Trains @ 60 mph |

DOT/AAR No.: 608846J
RR Division: RID

RR Mile Post: 15.61
RR Sub-Division: Joliet

For Freight/Passenger Information Contact: Marilyn Schlismann Phone: 312-322-7093
For Insurance Information Contact: Marilyn Schlismann Phone: 312-322-7093

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

Illinois Department of Transportation
Bureau of Design and Environment
2300 South Dirksen Parkway, Room 326
Springfield, Illinois 62764

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

SILT FENCE, GROUND STABILIZATION AND RIPRAP FILTER FABRIC (BDE)

Effective: November 1, 2019

Revise Article 1080.02 of the Standard Specifications to read:

“1080.02 Geotextile Fabric. The fabric for silt filter fence shall consist of woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence.

The fabric for ground stabilization shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 2 and nonwoven fabrics shall be Class 1 according to AASHTO M 288.

The physical properties for silt fence and ground stabilization fabrics shall be according to the following.

| PHYSICAL PROPERTIES | | | |
|---|--------------------------------|--|---|
| | Silt Fence Woven ^{1/} | Ground Stabilization Woven ^{2/} | Ground Stabilization Nonwoven ^{2/} |
| Grab Strength, lb (N) ^{3/} ASTM D 4632 | 123 (550) MD 101 (450) XD | 247 (1100) min. ^{4/} | 202 (900) min. ^{4/} |
| Elongation/Grab Strain, % ASTM D 4632 ^{4/} | 49 max. | 49 max. | 50 min. |
| Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{4/} | -- | 90 (400) min. | 79 (350) min. |
| Puncture Strength, lb (N) ASTM D 6241 ^{4/} | -- | 494 (2200) min. | 433 (1925) min. |
| Apparent Opening Size, Sieve No. (mm) ASTM D 4751 ^{5/} | 30 (0.60) max. | 40 (0.43) max. | 40 (0.43) max. |
| Permittivity, sec ⁻¹ ASTM D 4491 | 0.05 min. | | |
| Ultraviolet Stability, % retained strength after 500 hours of exposure ASTM D 4355 | 70 min. | 50 min. | 50 min. |

1/ NTPEP results or manufacturer’s certification to meet test requirements.

2/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.

3/ MD = Machine direction. XD = Cross-machine direction.

4/ Values represent the minimum average roll value (MARV) in the weaker principle direction, MD or XD.

5/ Values represent the maximum average roll value.”

Revise Article 1080.03 of the Standard Specifications to read:

“1080.03 Filter Fabric. The filter fabric shall consist of woven yarns or nonwoven filaments of polyolefins or polyesters. Woven fabrics shall be Class 3 for riprap gradations RR 4 and RR 5, and Class 2 for RR 6 and RR 7 according to AASHTO M 288. Woven slit film geotextiles (i.e. geotextiles made from yarns of a flat, tape-like character) shall not be permitted. Nonwoven fabrics shall be Class 2 for riprap gradations RR 4 and RR 5, and Class 1 for RR 6 and RR 7 according to AASHTO M 288. After forming, the fabric shall be processed so that the yarns or filaments retain their relative positions with respect to each other. The fabric shall be new and undamaged.

The filter fabric shall be manufactured in widths of not less than 6 ft (2 m). Sheets of fabric may be sewn together with thread of a material meeting the chemical requirements given for the yarns or filaments to form fabric widths as required. The sheets of filter fabric shall be sewn together at the point of manufacture or another approved location.

The filter fabric shall be according to the following.

| PHYSICAL PROPERTIES ^{1/} | | | | |
|--|-------------------------------|--------------------|-------------------------------|--------------------|
| | Gradation Nos. RR 4 & RR 5 | | Gradation Nos. RR 6 & RR 7 | |
| | Woven | Nonwoven | Woven | Nonwoven |
| Grab Strength, lb (N) ASTM D 4632 ^{2/} | 180 (800) min. | 157 (700) min. | 247 (1100) min. | 202 (900) min. |
| Elongation/Grab Strain, % ASTM D 4632 ^{2/} | 49 max. | 50 min. | 49 max. | 50 min. |
| Trapezoidal Tear Strength, lb (N) ASTM D 4533 ^{2/} | 67 (300) min. | 56 (250) min. | 90 (400) min. | 79 (350) min. |
| Puncture Strength, lb (N) ASTM D 6241 ^{2/} | 370 (1650) min. | 309 (1375) min. | 494 (2200) min. | 433 (1925) min. |
| Ultraviolet Stability, % retained strength after 500 hours of exposure - ASTM D 4355 | 50 min. | | | |

1/ NTPEP results to meet test requirements. Manufacturer shall have public release status and current reports on laboratory results in Test Data of NTPEP’s DataMine.

2/ Values represent the minimum average roll value (MARV) in the weaker principle direction [machine direction (MD) or cross-machine direction (XD)].

As determined by the Engineer, the filter fabric shall meet the requirements noted in the following after an onsite investigation of the soil to be protected.

| Soil by Weight (Mass) Passing the No. 200 sieve (75 μm), % | Apparent Opening Size, Sieve No. (mm) - ASTM D 4751 ^{1/} | Permittivity, sec^{-1} ASTM D 4491 |
|--|---|---|
| 49 max. | 60 (0.25) max. | 0.2 min. |
| 50 min. | 70 (0.22) max. | 0.1 min. |

1/ Values represent the maximum average roll value.”

80419

SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.
The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor’s submitted DBE utilization plan.

The report shall be made through the Department’s on-line subcontractor payment reporting system within 21 days of making the payment.”

80397

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017

Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

“This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor’s work.

| Value of Subcontract Reported on Form BC 260A | Mobilization Percentage |
|---|-------------------------|
| Less than \$10,000 | 25% |
| \$10,000 to less than \$20,000 | 20% |
| \$20,000 to less than \$40,000 | 18% |
| \$40,000 to less than \$60,000 | 16% |
| \$60,000 to less than \$80,000 | 14% |
| \$80,000 to less than \$100,000 | 12% |
| \$100,000 to less than \$250,000 | 10% |
| \$250,000 to less than \$500,000 | 9% |
| \$500,000 to \$750,000 | 8% |
| Over \$750,000 | 7%” |

80391

TRAFFIC CONTROL DEVICES - CONES (BDE)

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

80409

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

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 40 working days.

80071

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (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 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 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.