

SECTION 02316

SOIL, FILL, BACKFILL, CU STRUCTURAL SOIL, CONSTRUCTION & DEMOLITION DEBRIS REMOVAL

PART 1 - GENERAL

1.1 Related Sections:

- A. Section 01524 – Construction Waste Management
- B. Section 02318 – Acceptance of Backfill, Topsoil and CU Structural Soil

1.2 Summary:

- A. Work included: This specification is for the excavation, stockpiling, loading, hauling, removal, and disposal of any soils (including non-special waste soils and non-hazardous special waste soils), fill, backfill, top soil, CU Structural Soil, and general construction and demolition debris from PBC properties. The Contractor shall perform the work under this section in accordance with all applicable local, county, IEPA, USEPA, and OSHA regulations. The Work shall include the following:

1. Removal and disposal

- a. Excavation of soils (including non-special waste soils and non-hazardous special waste soils), fill, backfill, top soil, CU Structural Soil, and general construction and demolition debris materials to the depth required to complete the proposed site preparation/construction work activities as specified in the Architect/Engineer drawings and specifications.
- b. Obtain authorization from a Permitted Subtitle D landfill indicating acceptance of materials at the facility. The Authorization must be signed by the owner of the Permitted Subtitle D landfill and state that the facility complies with all local zoning codes and all local, State, and Federal rules and regulations, that all required laboratory analyses has been received by the facility, and that the facility has agreed to accept the soils (including non-special waste soils, and non-hazardous special waste soils), fill, backfill, top soil, CU Structural Soil, and general construction and demolition debris materials. The Authorization shall further state that the soils (including non-special waste soils and non-hazardous special waste soils), fill, backfill, top soil, CU Structural Soil, general construction and demolition debris materials are being accepted for permanent placement on site, and that the material will not be removed from the site unless required by a local, State or Federal Authority.
- c. Perform analytical testing for waste stream authorizations as necessary to secure all required disposal permits for all materials.
- d. Load and transport all materials to the approved Permitted Subtitle D landfill, unless directed otherwise by the PBC.

- e. Prepare daily reports, transport manifests, weight tickets and receipts (as applicable) prior to starting any soil removal activities.
- f. Provide copies of all daily reports, transport/waste manifest, weight tickets, and disposal receipts (as applicable) to the PBC Project Manager and MEC on a daily basis documenting proper disposal of soils (including non-special waste soils and non-hazardous special waste soils), fill, backfill, top soil, CU Structural Soil, and general construction and demolition debris materials.

2. Placement of backfill, top soil, CU structural soil

- a. The contractor shall supply only backfill, top soil and CU Structural Soil per project specifications and which does not exceed 35 IAC 742 Appendix B, Table A values for 35 IAC 740 APPENDIX A Target Compound List (TCL) parameters. For each source used, one representative sample per 1,000 tons of material must be analyzed for 35 IAC 740 APPENDIX A Target Compound List (TCL) parameters. A copy of the analytical results shall be submitted at least one week prior to depositing backfill or top soil on site. The date of the laboratory analysis of any backfill, top soil or CU structural soil shall be within 120 days of importing such material to the site.

1.3 DEFINITIONS

- A. Agency means Illinois Environmental Protection Agency (IEPA).
- B. Backfill means granular or cohesive material used to fill the excavation to design grade as referenced in Section 02318, and which does not exceed 35 IAC 742 Appendix B values for 35 IAC 740 APPENDIX A Target Compound List (TCL) parameters.
- C. PBC Project Manager means the person or entity designated as the official representative of the owner in connection with a project.
- D. CU Structural Soil means a uniformly blended mixture of crushed stone, clay, loam and hydrogel as referenced in Specification 02901.
- E. Fill means any earthen or non-earthen materials including but not limited to any sediment, granular or cohesive non-native earthen materials, cinders, ash, wood, and brick, concrete, and asphalt fragments, glass, and building debris encountered above naturally occurring undisturbed soils or bedrock in built-up areas.
- F. General Construction and Demolition (C&D) Debris means non-hazardous, uncontaminated materials resulting from construction, remodeling, repair, and demolition of utilities, structures, and roads as defined in Section 01524.
- G. Permitted Subtitle D landfill means any solid waste landfill facility in any state licensed and/or permitted to accept non-hazardous waste.
- H. IEPA means Illinois Environmental Protection Agency.
- I. IDOT means Illinois Department of Transportation.

- J. Manifest means the form provided or prescribed by IEPA and used for identifying name, quality, routing, and destination of special waste during its transportation from point of generation to the point of disposal, treatment, or storage.
- L. Managing Environmental Consultant (MEC): The entity that will perform environmental oversight on the behalf of the PBC. AECOM, Inc. is the MEC for this project.
- M. MSDS means Material Safety Data Sheet, required by OSHA for any substances that are toxic, caustic, or otherwise potentially hazardous to workers.
- N. OSHA means Occupational Safety and Health Administration.
- P. Soil means any granular or cohesive materials designated for removal as specified in the Architect/Engineer drawings and specifications and includes soils that are determined to be non-special and special waste.
- R. SROs mean Soil Remediation Objectives for various exposure routes identified in 35 Illinois Administrative Code 742: Tiered Approach to Corrective Action Objectives (TACO).
- S. Storm water means water deposited at the site in the form of rain, snow or other natural weather event.
- T. TACO means TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (TACO) per 35 Illinois Administrative Code 742 (35 IAC 742).
- U. Top Soil means soils placed to design grade and used to promote vegetative growth, and which does not exceed 35 IAC 742 Appendix B values for 35 IAC 740 APPENDIX A Target Compound List (TCL) parameters.
- V. USEPA means United States Environmental Protection Agency.

1.4 Submittals

- A. Copies of the following submittals shall be prepared and submitted to the PBC Project Manager and MEC at Contractor's own cost:
 - 1. Soil, Fill, Backfill, CU Structural Soil, Construction and Demolition Debris Removal
 - a. In the event that special or hazardous waste soils are encountered which exceed the NIOSH or OSHA PEL for an 8-hour work day a Contractor's Site Specific Health and Safety Plan will be required. The Contractor's Site Specific Health and Safety Plan will be required for all workers engaged in excavation, stockpiling, loading, hauling, removal, and disposal of any such soils. The plan shall comply with all OSHA requirements. The work shall be performed under the direct supervision of a trained experienced site supervisor. The plan should at a minimum include the following:
 - 1) Name key personnel and alternates responsible for site safety.
 - 2) Describe the risks associated with each operation conducted.
 - 3) Type of personnel training and responsibilities and to handle the specific hazardous situations they may encounter.

- 4) Describe the protective clothing and equipment to be worn by personnel during various site operations.
 - 5) Describe any site-specific medical surveillance requirements.
 - 6) Describe the program for the periodic air monitoring, personnel monitoring, and environmental sampling if needed.
 - 7) Describe the actions to be taken to mitigate existing hazards to make the work environment less hazardous.
 - 8) Define site control measures including a site map.
 - 9) Establish procedures for personnel and equipment and transporting trucks to ensure that impacted soils are not tracked off site on to non-impacted areas of the site.
 - 10) Set forth the site Standard Operating Procedures (SOPs). SOPs are those activities that can be standardized (i.e., decon procedures and respirator fit testing).
 - 11) Set forth a Contingency Plan for the safe and effective response to emergencies.
- b. Soil Management Plan outlining proposed excavation work sequences and procedures to separate each type of material to be removed from the site from clean materials. The Soil Management Plan shall show the locations of each type of material to be stored on site, location of clean materials to be stored at the site for reuse, and location of material to be stored on site for future disposal. The Plan shall also include information regarding concrete and brick recycling procedures and name and address of the concrete and brick recycling sites that will be used as part of this project.
- c. Name, address and telephone number of the Permitted Subtitle D Landfill facility where soils (including non-special waste soils and non-hazardous special waste soils), fill, general construction and demolition debris are to be deposited. This submittal must be made prior to removal of any materials from the site. This information should include, at a minimum, the following:
- 1) Facility Name and Address and Telephone Number.
 - 2) Site Contact.
 - 3) Facility Identification Number issued by Illinois, U.S. EPA, or other state licensing agencies for Special Waste Disposal facility.
 - 4) USEPA Disposal Site ID numbers (for Hazardous Waste Sites only).
 - 5) State and/or Local Operational Permit Number(s) for the impacted Construction and Demolition Debris Disposal sites.
- d. Letter of authorization from the facility where soils (including non-special waste soils and non-hazardous special waste soils), fill, general construction and demolition debris are to be deposited prior to removal from the site. The authorization must be signed by the Permitted Subtitle D landfill facility representative and state that the facility complies with all local zoning codes and all local, State, and Federal rules and regulations, that all required laboratory analyses has been received by the facility, and that the facility has agreed to accept the soils (including non-special waste soils, and non-hazardous special waste soils), fill, and general construction and demolition debris materials. The Authorization shall further state that the soils (including non-special waste soils and non-hazardous special waste soils),

fill, general construction and demolition debris fill materials are being accepted for permanent placement on site, and that the material will not be removed from the site unless required by a local, State or Federal Authority.

- e. Copies of analytical results for each waste stream to be removed from the site as applicable. The name and address and telephone number of the laboratory that will be used by the Contractor to perform analytical testing for waste stream authorization.
- f. Storm Water Management Plan - prior to commencing work, the contractor shall provide a liquid materials handling plan. This plan shall stipulate provisions for dewatering, pumping, collection, temporary storage, and discharge or disposal of storm water, perched water and other liquids, contaminated and/or uncontaminated, at the site so as to facilitate soil removal and minimize disposal costs for contaminated fluids.
- g. Copies of all daily reports, transport/waste manifests, weight tickets and receipts (as applicable) to the PBC Project Manager and/or MEC on a daily basis.
- h. Any sampling data collected during the course of the Work.

1.5 Submittal Review

- A. Review of submittals or any comments made does not relieve the Contractor from compliance with the requirements of the drawings and specifications. The purpose of this check is to review for general conformance with the design concept of the project and general compliance with the information given in the contract documents. The Contractor is responsible for confirming and correlating all quantities and dimensions; electing techniques of construction; coordinating the Work; and performing the Work in a safe and satisfactory manner.

1.6 Notifications

- A. The Contractor shall notify the PBC Project Manager and MEC no less than two (2) business days prior to loading and transporting any materials from the site.

1.7 Recordkeeping

- A. The Contractor shall provide documentation of labor, equipment, materials and disposal laboratory analysis used for soil removal, when requested by the PBC Project Manager and MEC.

PART 2 - PRODUCTS

2.1 Removal of Soil, Fill, Backfill, CU Structural Soil, and Construction and Demolition Debris

- A. The Contractor shall furnish all necessary means, products, tools, and equipment required to remove soil (including non-special waste soils and non-hazardous special waste soils), fill, backfill, CU Structural Soil and construction and demolition debris from the site as directed by the PBC Project Manager and MEC.

PART 3 - EXECUTION

3.1 Authorizations

- A. Obtain authorization from the Permitted Subtitle D landfill owner where soils (including non-special waste soils and non-hazardous special waste soils), fill, backfill, CU Structural Soil and construction and demolition debris are to be deposited. The Authorization must be signed by the PBC Deputy Director for Environment and shall state that the property owner has received a copy of one or more laboratory analyses of representative sample(s) collected from the site by the contractor and/or MEC and has agreed to accept the material. The Authorization shall further state that the site owner agrees to accept the material for permanent placement on their site and that the material will not be removed from their site unless required by a local, State or Federal Authority. The Authorization further shall state that the site complies with all local zoning codes, State, Federal and Local laws, rules, and regulations.
- B. Obtain prior authorization from PBC Project Manager and MEC to backfill excavations and utility lines, and apply top soil. All backfill, CU Structural Soil, and top soil shall comply with site specific project specifications.
- C. Haulers for transportation of soils, backfill and top soil shall hold, and present upon request, a current valid Commercial Driver's License (CDL).

3.2 Material Sampling

- A. Soil, Fill, Backfill, CU Structural Soil, Construction and Demolition debris
 1. The Contractor shall collect sufficient amount of representative sample(s) from each type of material being removed from the site for analytical testing to obtain authorization for the ultimate disposition of the materials. The contractor is responsible for acquisition of any required permits and payment of all fees.
 2. The Contractor shall be responsible for obtaining liquid samples as needed for characterization for liquid disposal offsite or disposition onsite as applicable. The Contractor is responsible for the acquisition of any required disposal permits and the payment of any fees associated with liquid disposal.
 3. The Contractor shall submit the soil and liquid samples (as applicable) to the laboratory and pay for the cost of analyzing the constituents required for the ultimate disposition of soils and liquids.
 4. The MEC may collect samples for laboratory analysis or field Photo-ionization Detector (PID) screening, or liquid samples for laboratory analysis. The Contractor shall provide the necessary equipment and manpower to assist the MEC to collect materials to be sampled at no additional cost to the project.

5. The Contractor shall immediately notify the PBC Project Manager and the MEC if any materials, (solid or liquid) requiring special handling (i.e., stained soil, soil with odors, or liquids) are encountered.
6. All excavated soils, liquids, and other material shall be removed from the site in accordance with applicable federal, state and local regulations.

3.3 Excavation

- A. The Contractor shall perform excavation of soils (including non-special waste soils and non-hazardous special waste soils), fill, backfill, CU Structural Soil and construction and demolition debris as directed by the PBC Project Manager and/or MEC.
- B. All excavation shall be performed in accordance with OSHA requirements and guidelines.

3.4 Hauling

- A. The Contractor shall remove soils, dust, rocks, etc. from the exterior of trucks, trailers, or other heavy equipment leaving the site before they leave the site.
- B. The Contractor shall clean the tractor-trailers or trucks that are loaded with materials for off site placement/salvage by removing clinging soils, or rocks from the exterior of the equipment.
- C. The Contractor shall implement adequate control measure to mitigate the generation of dust during excavation, loading or soil removal and shall maintain adequate dust suppression equipment on site if conditions warrant.
- D. The Contractor shall maintain streets clean and free of mud and dirt. The contractor shall provide a street sweeper for street maintenance, if requested by the PBC, at no additional cost to the project.
- E. The Contractor shall conduct soil (including non-special waste soils and non-hazardous special waste soils), fill, backfill, CU Structural Soil and construction and demolition debris removal in a manner that ensures minimum interference with roads; streets, walks and other adjacent occupied and used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the applicable governing agency and PBC Project Manager. Provide alternate routes around closed or obstructed traffic ways if required by the governing agency.

3.5 Transportation

- A. The Contractor shall remove soils, dusts, rocks, etc. from the exterior of trucks, trailers, or other heavy equipment leaving the site before they leave the site. The Contractor shall provide and complete copies of all daily reports, weight tickets and receipts (as applicable) for transportation and ultimate off site placement of materials removed from the property to the PBC Project Manager, review and signature as required.

3.6 Dust Control

- A. The Contractor shall control dust by all necessary means, including but not limited to covering trucks, stockpiles and open materials, watering haul roads, sweeping paved roads, and limiting the speed of all on-site vehicles. If such controls are not effective, the contractor shall apply dust suppression agents to exposed sources of dust at no additional cost.

3.7 Liquid (Water) Management

- A. The Contractor shall subscribe to a weather notification system and manage the work so as to minimize the accumulation of storm water on the site during excavation.
- B. The Contractor is responsible for obtaining the MWRD discharge permit prior to the start of work.
- C. Prior to commencing work, the contractor shall provide a storm water management plan. This plan shall stipulate provisions for dewatering, pumping, collection, temporary storage, and discharge or disposal of storm water, perched water and other liquids, contaminated and/or uncontaminated, at the site so as to facilitate soil removal and minimize disposal costs for contaminated fluids.
- D. The Contractor shall ensure that contamination of water, perched water and previously uncontaminated water or perched water does not occur by preventing the contact of such liquid with materials that exceed Title 35: Environmental Protection Subtitle G: Waste Disposal Chapter I: Pollution Control Board Subchapter F: Risk Based Cleanup Objectives, Part 742, Tiered Approach To Corrective Action Objectives, Appendix B, Table A values for 35 ILL. ADM CODE 740 APPENDIX A Target Compound List (TCL) parameters. Earthen berms, plastic (polyethylene) sheeting, pumping, and other such means, as specified in the approved Storm water Management Plan, may be used.
- E. If the Contractor, through negligence, allows storm water to contact materials that exceed 35 IAC 742 Appendix B, Table A values for 35 IAC 740 APPENDIX A Target Compound List (TCL) parameters, the water must be disposed of as water that exceeds 35 IAC 742 Appendix B, Table A values for 35 IAC 740 APPENDIX A Target Compound List (TCL) parameters. The Contractor will be responsible for the additional costs incurred for any disposal analysis and disposal costs.

3.10 Quality Control

- A. Visual inspections and damage repairs shall be made daily by the Contractor and/or as directed by the PBC Project Manager to assure that erosion, drainage and containment control measures are functioning properly.
- B. The Contractor shall take all necessary precautions to protect structures, equipment, pavement, walks and utilities against movement or settlement during the course of work.
- C. Damages: Promptly replace or repair any damage caused to adjacent pavement, utilities or facilities by removal operations at no additional cost. Work shall be performed to the satisfaction of the PBC Project Manager.

PBC Control Rev: 1_01/07/10

Project Rev: A_01/07/10

- D. Utility Services: Maintain existing utilities and protect against damage during removal operations.

PART 4 - MEASUREMENT AND PAYMENT

4.1 CONTRACT UNIT PRICING

- A. Volume determination and pricing shall in accordance with the contract documents.

END OF SECTION