FIRST AMENDMENT
GEOTECHNICAL INVESTIGATION
FOR VARIOUS SITES
AGREEMENT NUMBER PS1558A

THIS FIRST AMENDMENT AGREEMENT is made and entered into as of the 8th day of January, 2013, and shall be deemed and taken as forming a part of the Agreement for Geotechnical Investigation for Various Sites ("Agreement") by and between the **PUBLIC BUILDING COMMISSION OF CHICAGO**, a municipal corporation of the State of Illinois ("Commission") and **AECOM TECHNICAL SERVICES, INC.** ("Consultant") dated April 29, 2010 with the like operation and effect as if the same were incorporated therein.

WITNESSETH:

WHEREAS, the Commission and Consultant have heretofore entered into an Agreement dated April 29, 2010, wherein the Consultant is to provide Geotechnical Investigation Services for Various Sites for the Commission; and

WHEREAS, the Commission and Consultant now desire to amend the Agreement to exercise its option to extend the Agreement terms;

WHEREAS, the Commission and Consultant now desire to amend the Agreement to modify the basic services to the Scope of Services;

NOW THEREFORE, in consideration of the provisions and conditions set forth in the Agreement and herein, the parties hereto mutually agree to amend the Agreement as hereinafter set forth.

It is agreed by and between the parties hereto that the sole modification of, changes in and amendments to the Agreement pursuant to this Amendment are as follows:

TERMS

1. **Recitals**

   THE ABOVE RECITALS ARE EXPRESSLY INCORPORATED IN AND MADE A PART OF THE AMENDMENT CONTRACT AS THOUGH FULLY SET FORTH HEREIN.

2. **Article VI. Terms,** is revised to extend the term of the Agreement to January 7, 2014.

3. **Schedule B - Scope of Services**

   3.1 Schedule B – Scope of Services pages 15 to 19 is replaced in its entirety with **Attachment 1.**

Execution of this Amendment by the Consultant is duly authorized by the Consultant, and the signature(s) of each person signing on behalf of the Consultant have been made with the complete and full authority to commit the Consultant to all terms and conditions of this Amendment.

All capitalized terms not defined herein shall have the meaning ascribed to them in the Agreement. Except as and to the extent that the terms of the Agreement are amended and modified herein, all terms of the Agreement shall remain in full force and effect.

(Signature Page follows)

IN WITNESS WHEREOF, the parties hereto have agreed and executed this Amendment No. 1.

PUBLIC BUILDING COMMISSION OF CHICAGO

BY: Rahm Emanuel Date: _____
Chairman

ATTEST:

BY: _____ Date: 2/14/13
Secretary

AECOM TECHNICAL SERVICES, INC.

By: _____ Date: Jan 11, 2013
~~President~~ EXEC. VICE PRESIDENT

AFFIX CORPORATE

SEAL, IF ANY, HERE

County of: Lake

State of: Illinois

Subscribed and sworn to before me by Andrew Haubert

on behalf of Contractor this 11th day of January, 2013.

_____
Notary Public

My Commission expires:

(SEAL OF NOTARY)

OFFICIAL SEAL
EDWIN V SANTOS
NOTARY PUBLIC STATE OF ILLINOIS
MY COMMISSION EXPIRES:06/01/16

Approved as to form and legality

Anne L. Fredd
Neal & Leroy, LLC

Date: Jan 24, 2013

FIRST AMENDMENT
GEOTECHNICAL INVESTIGATION
FOR VARIOUS SITES
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ATTACHMENT A
SCOPE OF SERVICES

(SCOPE OF SERVICES FOLLOWS THIS PAGE)

SCHEDULE B

SCOPE OF SERVICES
GEOTECHNICAL INVESTIGATION – PS1558

General Scope of Services – Geotechnical Consultant

The Consultant will enter into Task Order agreement with the PBC. The Consultant will provide, on a Task Order basis, all Services required to complete Geotechnical Investigation and reporting of the assigned project or projects.

Consultant will be responsible for the professional, technical accuracy and completeness of the Geotechnical Report and any other reports deemed necessary by the PBC.

The Consultant shall attend a coordination meeting with the PBC, Authorized PBC Representative (or Project Manager) and other designated design professionals prior to proceeding with the work. Further, the Consultant shall make themselves available for all meetings, including at Progress Meetings and Special Meetings as deemed necessary by the PBC at no additional cost to the PBC.

Project specific information shall be provided by the PBC Project Manager, when available to the Consultant to include, but not limited to, the following:

1. Basic Project Information (Project Name, Location, Description, etc.)
2. Existing Site Survey
3. Site Aerial Photo
4. Proposed Soil Boring Location Map (by Engineer of Record if required)

A. Field Investigation:

The Consultant must verify permitting requirements and secure permits as required.

The Consultant must comply with local regulations and codes.

Prior to commencing with any field investigation activities, the Consultant and its selected drilling Sub-Consultant or Subcontractor shall contact DIGGER to mark underground utilities in public rights-of-way. The Consultant shall verify the locations of any utilities on site. The Consultant shall be responsible for any damage done to utilities.

Benchmark: The Consultant shall retain the services of a Surveyor to establish one (1) permanent benchmark on the project site with a description and elevation to the nearest 0.01 feet and reference its elevation to the official City of Chicago datum and shall provide a drawing locating or include its location and description on the final boring location plan.

Percolation Test: The Consultant shall develop a percolation test plan when requested by the PBC based on the actual site characteristics and basic project information. The proposed test locations shall be indicated on a sketch accompanying the Consultant's proposal. The percolation tests should refer to guidelines for BMPs in City of Chicago Stormwater Management Ordinance Manual. Locate tests at proposed parking and landscaped areas. Indicate proposed percolation test procedures.

Boring Location Plan: The Consultant shall develop an initial geotechnical boring location plan based on the actual site characteristics, basic project information and a proposed boring location plan when provided by the PBC. The location and depth of proposed borings shall be indicated on a sketch accompanying the Consultant's proposal. If the Consultant finds it necessary to change the location

and depth of any of the proposed borings, the PBC Project Manager shall be notified and a new location or depth shall be agreed upon between the PBC Project Manager and the Consultant prior to the start of drilling work. Since building and site plans, when provided, are conceptual, the location and depth of all soil borings are tentative and the final locations and depths may be changed as directed by the PBC to suit a revised building or site plan prior to starting the drilling work.

Borings: The following are suggested guidelines for number and depth of soil borings for initial project geotechnical screening purposes. The Consultant is responsible for developing / recommending his/her own plan based off real-time site information.

1. Number of Soil Borings
    a. Building: Drill a minimum of one (1) boring per 3,000 square feet of proposed building.
    b. Parking / Site: Drill a minimum of one (1) boring per 6,000 square feet of proposed parking area and/or site development.
2. Depth of Soil Borings
    a. Building: Drill a minimum of two (2) borings to 50 feet depth or to refusal (50 blows/6 inches of penetration), whichever occurs first; the remaining soil borings shall be drilled to a minimum of 25 - 30 feet depth.
    b. Parking / Site: Drill all borings to 5 – 10 feet depths or to refusal (50 blows/6 inches of penetration), whichever occurs first.

Soil borings shall be drilled in accordance with the American Society for Testing and Material (ASTM) Standard D 1586, Penetration Test and Split-Barrel Sampling of Soils. Soil borings shall not be terminated in loose and/or soft soils, consult with PBC Project Manager prior to the termination of that soil boring to ensure that the available data collected will provide adequate design information. If cohesive soils are encountered, undisturbed soil samples shall be obtained with a Shelby Tube sampler in accordance with ASTM Standard D 1587, Thin-Walled Tube Sampling of Soils. Obtain one undisturbed sample for each 10 feet of cohesive soil encountered. Record groundwater level measurements during drilling, at completion of boring, and 24 hours following the completion of the boring, and at completion of entire work, as applicable, and record any cave-ins. Install two (2) piezometers for checking ground water table, when directed by the PBC. Provide infiltration and exfiltration data. Take readings on a weekly basis for two (2) months.

The Consultant shall advise the PBC Manager as to any further exploration and testing required to obtain information that the engineer may require for a professional interpretation of subsoil conditions at the building site. Stake out the boring locations and accurately establish, by engineer's level or transit, the ground surface elevation of each boring.

Soil borings, to confirm the feasibility of infiltration designs or refine their design or locations, are to be located near the proposed infiltration device location. Provide data / information per City of Chicago Stormwater Management Guidance Manual Section 3.2.1.1 Geotechnical Investigations (go to http://www.cityofchicago.org and follow these links: City Departments>Environment>Initiates & Programs>Water Quality & Stormwater Management).

Drilling and Sampling Methods: The Consultant shall perform drilling and sampling in accordance with ASTM Standards D 1586 and D 1587, as applicable. Standard Penetration Test N values shall be recorded, at a minimum at 2.5, 5.0, 7.5, and 10.0 feet depths and then at 5.0-foot intervals thereafter to the end of the boring. Soil samples shall be classified in accordance with ASTM Standards D-2487 and D-2488. Samples shall be preserved and field logs prepared by either the Geotechnical Engineer or an experienced soils technician working under the supervision of the Geotechnical Engineer the

labor cost for which shall be included in the applicable unit price item. The final depth of the soil borings is to be determined by the Consultant based on the anticipated foundation loads provided by the PBC or estimated and the expected soil profile in the area. Unconfined compressive strength values of cohesive soil samples, using a pocket penetrometer or Soil Strength Classifier shall be obtained in the field and recorded on the field logs as applicable.

Protection of Property: The Consultant shall contact the PBC Project Manager and all utility companies for information regarding buried utilities and structures, shall take all reasonable precautions to prevent damage to property both visible and concealed, and shall restore the site to the conditions existing prior to the Consultant's entry.

The Consultant or their driller shall remove all soil cuttings, spoil, drilling mud and any other debris produced by their activities from the project site and legally dispose of those materials at no additional cost to the PBC, unless otherwise approved or as directed by the PBC. Removal shall be accomplished immediately upon completion of site work and cleanup.

B. Laboratory Testing:

The Consultant shall perform laboratory work in accordance with recognized tests and procedures. Perform only those tests outlined in the letter of authorization or specifically requested as a result of fieldwork.

Building Area Soil Samples: At a minimum, assume one (1) representative soil sample from each soil layer encountered in each soil boring for laboratory testing as follows:

1. Cohesionless (granular) Soils: Particle size distribution (ASTM D-422), Unified Soil Classification (USCS) per ASTM D-2487/D-2488; and relative density test per ASTM D-4254..
2. Cohesive (clayey) Soils: -#200 Sieve Size (ASTM D-1140), Atterberg Limits (Liquid Limit and Plastic Limit) per ASTM D-4318, USCS per ASTM D-2487/D-2488, Unconfined Compressive Strength of Cohesive Soils (ASTM D-2166) (one test per boring), One-Dimensional Consolidation Properties of Soils (ASTM D-2435) (0 to 2 tests for the entire project depending on the soil types encountered), and Water Content Test per ASTM D-2216.
3. Obtain organic content for top soil and fill materials.
4. The Consultant shall determine the need for optional CBR testing in accordance with ASTM D-1883 or ASTM D-4429 based on the proposed site work and site characteristics and include such recommendation, if deemed appropriate, in the proposal. The recommendation shall include the proposed number of tests and locations as well as recommended procedures and the need basis for the testing.

C. Geotechnical Reporting

Field and Laboratory Reporting Requirements: Prepare reports in accordance with the following:

1. Report immediately any unusual conditions encountered such as peat, rock outcroppings, cattails, soil stockpiles, etc.
2. Record all data in accordance with the latest ASTM standards.
3. Include with the report a chart illustrating the soil classification criteria and the terminology and symbols used on the boring logs.
4. Identify the ASTM standards utilized. For percolation tests, describe test procedures where applicable.
5. Provide a site plan giving dimensioned locations and ground surface elevations of test borings

and percolation tests where applicable.

6. Provide vertical sections for each boring plotted and graphically presented showing number of borings, sampling method used, date of start and finish, surface elevations, description of soil and thickness of each layer, depth to loss or gain of drilling fluid, hydraulic pressure required or number of blows per foot, and depth and elevation of ground water. Note the location of strata containing organic materials, wet materials or other inconsistencies that might affect engineering conclusions.
7. Describe the existing surface conditions, and provide a figure showing generalized subsurface as well as summarize the subsurface conditions (e.g., asphalt, broken concrete, top soil, pavement, fill, etc).
8. Report laboratory determinations of all soil properties and include a table summarizing all field and laboratory test results.
9. Report results of percolation tests in MPI (minutes per inch) for infiltration practices and of percolation tests per the Chicago Stormwater Management Ordinance Manual.
10. Management Guidance requirements to support on-site storm water management strategies.

Disposition of Samples: Retain samples at the Consultant's office until foundation installation is complete, and then legally dispose all remaining soil samples.

Evaluation and Recommendations: The Consultant shall analyze the information developed by investigation and submit a professional evaluation and recommendations for the necessary areas of consideration, including, but not limited to, the following:

1. Method of lateral force transfer between footing and supporting soil, foundation support of the structure and slabs, including allowable bearing capacity, recommended foundation depths / elevations, foundation design recommendations (shallow and/or deep foundations) and anticipated settlements (maximum total settlement and differential settlement).
2. Anticipation of, and management of, groundwater for design of structures and pavements and design and construction of site development.
3. Material and compaction requirements for site fill, construction backfill, and for the support of structures and pavements.
4. Vertical subgrade modulus for design of pavements or slabs.
5. If deep foundation design is needed, include foundation types, e.g. pile, drilled pier/caisson, etc., and vertical/lateral capacities, etc. and all necessary geotechnical parameters, e.g., saturated and submerged soil densities, angle of internal friction, cohesion, adhesion, wall friction as applicable, horizontal subgrade modulus, etc. Also include any recommendations for any further testing required. (i.e. shear vane test for caissons).
6. Include all detailed calculations used in development estimates, findings or recommendations contained or used in the report.

Presence at Meetings: The Consultant shall be available for meetings, if requested by the PBC to discuss the investigation results to the PBC Project Manager and assigned Civil and Structural Engineering team members.

Deliverables: The Consultant shall provide two (2) print copies and one (1) electronic copy in PDF format for the "First Draft" review and comments. The Consultant shall be prepared to discuss and implement revisions to the document as necessary. After making the required revisions, the

Consultant shall then provide one (1) electronic copy in PDF format as an "Interim Final Report" to the PBC for review and comment incorporating the comments from the First Draft Report. After incorporation of all comments, the Consultant shall submit five (5) bound print copies of the "Final Report" including the Soil Boring Location Plan, Soil Boring Logs, Soil Reports and all analysis and one (1) Electronic copy in PDF format on a CD to the PBC Project Manager.

Project Management: Project management when included under Task I of the Schedule of Cost shall include all management and administrative time to control and properly administer all the projects, resources, time, costs and complete scope through final completion of the project.

Proposal Content: Provide a proposal that includes as a minimum, the following:

1. A detailed description of the proposed Geotechnical Investigation scope of work and an accurate and full understanding of the services requested;
2. Project Manager(s) and key personnel who will be responsible for providing the services necessary for the Geotechnical Investigation and Report Preparation stated above, including those who will perform the work in the field and review the quality of the report. The proposal must state their roles and areas of responsibility or activities to be performed;
3. Copies of current licenses for all project managers and key personnel where applicable;
4. Designation of a Quality Control/Quality Assurance individual to review formatting and content prior to submittal of the report to the PBC; and
5. Date when Geotechnical Investigation can commence and the number of consecutive work days required to complete the complete scope of work.

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