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**BILL NO. S-13-08-14**

SPECIAL ORDINANCE NO. S-75-13

AN ORDINANCE approving PROFESSIONAL SERVICES AGREEMENT FOR THREE RIVERS PROTECTION & OVERFLOW REDUCTION TUNNEL (3RPORT) ADDITIONAL PHASE I GEOTECHNICAL INVESTIGATIONS W.O. #75918 between TESTECH, INC. and the City of Fort Wayne, Indiana, in connection with the Board of Public Works.

**NOW, THEREFORE, BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF FORT WAYNE, INDIANA:**

**SECTION 1.** That the PROFESSIONAL SERVICES AGREEMENT FOR THREE RIVERS PROTECTION & OVERFLOW REDUCTION TUNNEL (3RPORT) ADDITIONAL PHASE I GEOTECHNICAL INVESTIGATIONS W.O. #75918 by and between TESTECH, INC. and the City of Fort Wayne, Indiana, in connection with the Board of Public Works, is hereby ratified, and affirmed and approved in all respects, respectfully for:

All labor, insurance, material, equipment, tools, power, transportation, miscellaneous equipment, etc., necessary for Professional geotechnical services to support the Phase I geotechnical investigation for the Three Rivers Protection & Overflow Reduction tunnel or 3RPORT

involving a total cost of ONE HUNDRED SIXTY-ONE THOUSAND, NINE HUNDRED SEVENTY AND 00/100 DOLLARS - (\$161,970.00). A copy of said Contract is on file with the Office of the City Clerk and made available for public inspection, according to law.

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**SECTION 2.** That this Ordinance shall be in full force and effect from and after its passage and any and all necessary approval by the Mayor.

  
\_\_\_\_\_  
Council Member

APPROVED AS TO FORM AND LEGALITY

  
\_\_\_\_\_  
Carol Helton, City Attorney

**PROFESSIONAL SERVICES AGREEMENT**

**Three Rivers Protection & Overflow Reduction Tunnel (3RPORT)  
Additional Phase I Geotechnical Investigation**

This Agreement is by and between

**CITY OF FORT WAYNE ("CITY")**

by and through its

Board of Public Works  
City of Fort Wayne  
200 E. Berry Street, Suite 240  
Fort Wayne, IN 46802

and

**TesTech, Inc. ("CONSULTANT")**  
4714 Parnell Avenue  
Fort Wayne, IN 46825

Who agree as follows:

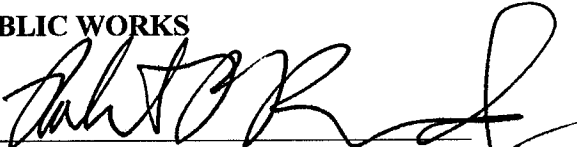
CITY hereby engages CONSULTANT to perform the services set forth in Part I – Requested Services for Phase II PIRS Study ("Services") and CONSULTANT agrees to perform the Services for the compensation set forth in Part III - Compensation ("Compensation"). CONSULTANT shall be authorized to commence the Services upon execution of this Agreement and written authorization to proceed from CITY. CITY and CONSULTANT agree that these signature pages, together with Parts I-IV and attachments referred to therein, constitute the entire Agreement ("Agreement") between them relating to the Project.

**APPROVALS**

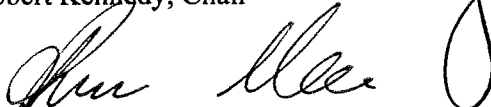
**APPROVED FOR CITY**

**BOARD OF PUBLIC WORKS**

BY:

  
Robert Kennedy, Chair


BY:

  
Kumar Menon, Member

BY:

  
Mike Avila, Member

ATTEST:


  
Victoria Edwards, Clerk

DATE:

August 7, 2013

**APPROVED FOR CONSULTANT**

BY:

  
Travis Burr, PE, Vice President

DATE:

8/5/13

## PART I

### REQUESTED SERVICES FOR PHASE II PIRS STUDY

#### A. GENERAL

This section covers the detailed technical requirements of the geotechnical investigation to collect information on rock and soil properties as part of the Three Rivers Protection & Overflow Reduction Tunnel (3RPORT) project for Fort Wayne City Utilities (CITY) located in Fort Wayne, Indiana. The Work consists of exploratory borings, piezometers, and field and laboratory tests.

The drilling CONSULTANT shall perform the Work in accordance with the approved Geotechnical Investigation Work Plan for the 3RPORT project. The CONSULTANT shall submit a Quality Assurance/Quality Control (QA/QC) Plan to accommodate particular requirements of the project.

Boring logs and piezometer installation logs will be recorded and prepared by the CITY's designated field representative. The CONSULTANT will receive a copy of the CITY's designated field representative preliminary logs for the CONSULTANT'S billing purposes if requested by the CONSULTANT.

#### B. ESTIMATED BORING DEPTHS

The following lists of borings shall be used as the basis for this Agreement. CITY's designated field representative will determine actual depths in the field, based on subsurface conditions encountered.

The borings to be performed as part of the Work are summarized in Table 1.

Boring Name	Vertical or Inclined	Approximate Total Depth (ft)	Approximate Overburden Depth (ft)	Approximate Rock Depth (ft)	Pressure Testing in Rock	Piezometer Depth (ft)
B-11	Inclined	305*	65*	240*	24	N/A
B-12	Vertical	285	80	205	20	285
B-13	Inclined	305*	95*	210*	21	N/A
B-14	Vertical	300	100	200	20	300
<b>Total</b>	<b>N/A</b>	<b>1,195</b>	<b>340</b>	<b>855</b>	<b>85</b>	<b>585</b>

\* Values adjusted for inclined borings to indicate actual length to be drilled.

#### C. REFERENCE STANDARDS

Wherever an ASTM designation is cited in this document, it shall mean the American Society for Testing and Materials Standard Specification of that designation appearing in the most recent edition of the "Annual Book of ASTM Standards," published by the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania, 19103. Other equivalent standards may be substituted if acceptable to CITY.

#### D. SURVEYING

CONSULTANT shall use CITY or CITY's designated field representative staked locations to locate the borings. CONSULTANT shall not start Work at any location until that location has been staked and the CITY or CITY's designated field representative has issued authorization to proceed. Locations of the borings shall be as generally shown on drawing included in Figure 1.

## **E. ROTARY WASH BORINGS**

Rotary wash borings shall include soil drilling and sampling. CONSULTANT shall provide drilling mud or temporary casing if required to maintain an open hole. Temporary casing may be required to stabilize the hole while advancing the boring. The casing shall be steel pipe of the size required by the drilling equipment and may be either new material or used material in good condition. CITY's designated field representative will document the size, length, and placement information on the boring log. No payment will be made for temporary casing left in place because of impracticability of removal.

## **F. AUGER BORINGS**

Auger borings shall be made by a machine driven auger at least 8-1/4 inches outside diameter. Unless otherwise accepted by CITY or CITY's designated field representative, auger borings shall be performed in accordance with ASTM D1452. Hollow stem augers may be used if the inner diameter is at least 4-1/4 inches.

## **G. ROCK CORING**

Rock coring shall be performed with an HQ-sized core barrel in accordance with ASTM D2113, except as otherwise specified herein or accepted by CITY. All rock coring shall be performed with high speed drilling machines specifically designed for rock coring and sampling. Water shall be used as the drilling fluid. No drilling fluid additives shall be allowed except for an organic polymer additive specifically approved by CITY.

Except as otherwise specified, core barrels shall be in accordance with ASTM D2113, Double or Triple Tube, Swivel-Type, "M"-design or better with split inner tube, or shall be equivalent barrels acceptable to CITY. Each core barrel shall have a core lifter suitable for catching and retaining cores in soft formations.

Core bits shall be in accordance with ASTM D2113, selected to provide the maximum core recovery, and acceptable to CITY.

Core barrels shall not be longer than 10 feet, unless otherwise accepted by CITY. Special care shall be taken to ensure that maximum recovery is obtained on each section of core.

Core runs shall be limited to 5 feet or less, if in the opinion of CITY's designated field representative such limit is needed to assure acceptable core recovery. Runs of 1 or 2 feet may be required to obtain acceptable core recovery in soft or broken material. The core shall be pulled whenever necessary to prevent loss or damage to the core. Grinding of the core after the core barrel has been blocked will not be permitted and a blocked core barrel shall be pulled regardless of the interval desired.

After each core run, the core barrel shall be opened by splitting the inner tube and the core will be logged by CITY's designated field representative while it is still contained in an undisturbed condition in one of the barrel halves. Only after the core run is logged will the core be removed from the inner tube halve and placed in the core box.

Rock cores from each boring shall be placed in CONSULTANT-furnished suitable durable boxes in accordance with ASTM D5079. Sturdy core boxes made out of wood shall be used for the purpose of storing rock cores. Cardboard or plastic boxes shall not be used. Core boxes shall be provided with hinges on one side and lockable latches on the other. Wooden spacers shall be furnished for separating core runs and for identifying the location of



FIGURE 1 ADDITIONAL PHASE I GEOTECHNICAL BORING LOCATIONS OVERVIEW	BAV PROJECT NO. 173983	<b>FORT WAYNE CITY          UTILITIES</b>
	WORK ORDER NO. 75605	THREE RIVERS PROTECTION & OVERVIEW REDUCTION TUNNEL - ADDITIONAL PHASE I GEOTECHNICAL INVESTIGATION
	DATE JUNE 2013	

**Legend:**

- CSO
- ◆ Phase I Shallow Boring
- Phase I Deep Vertical Boring
- ▲ Additional Phase I Deep Vertical Boring
- Additional Phase I Deep Vertical Boring
- ▣ Area of Interest



FORT WAYNE  
CITY UTILITIES



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Building a world of difference.

core losses. Under no condition shall cores from more than one hole be placed in the same box. CONSULTANT will label each box for identification in a manner acceptable to CITY's designated field representative.

Core samples for laboratory testing shall be selected and preserved according to ASTM D5079 immediately after a run has been logged and before the natural moisture content changes. The location of samples shall be marked with suitable, labeled spacers in the core boxes.

Rock cores that deteriorate upon exposure to air shall be preserved according to ASTM D5079 immediately upon recovery. CONSULTANT shall furnish all materials for preserving the rock cores and shall be responsible for preserving, boxing, and handling the cores at the site. CITY's designated field representative will label the cores for identification.

## **H. BOREHOLE COLLAR MONITORING**

The collar of each boring (top of casing) shall be monitored for methane and hydrogen sulfide. The collar and samples retrieved from the soil shall also be monitored using a Photo Ionization Detector with a bulb suitable for detection of volatile and semi-volatile compounds.

## **I. SAMPLING METHODS AND FREQUENCY**

Soil sampling in borings shall consist of split barrel samples on 2.5-foot intervals to a depth of 10 feet. Below a depth of 10 feet, until the final boring depth or rock is encountered, sampling shall consist of split barrel samples every 5 feet.

If cohesive soils are encountered, samples shall be taken at depths listed above, but thin walled tube samples shall be alternated with split barrel samples as directed by CITY's designated field representative.

The water level in each hole shall be maintained whenever drilling equipment is retracted in preparation for sampling to avoid unbalanced hydrostatic pressure that might wash in material from the sides and bottom of the hole or make the hole unstable.

## **J. SPLIT BARREL SAMPLING**

Split barrel samples shall be obtained and the resistance to soil penetration shall be measured in accordance with ASTM D1586. Penetration resistance (blow count) for all three 6-inch increments will be required. Sample jars for split barrel samples shall be wide mouth, 1-pint, moisture-proof glass jars provided by CONSULTANT.

## **K. THIN WALLED TUBE SAMPLING**

Thin walled tube samples shall be obtained in accordance with ASTM D1587. Tubes shall recover a sample at least 3 inches in diameter. Tubes shall be furnished by CONSULTANT in 30 to 36-inch lengths and shall either be constructed of seamless steel tubes or welded seam tubes provided welds do not project at the seam. Tubes shall be clean and free of corrosion. Tube samples shall not be extruded in the field. CONSULTANT shall keep the samples in their original sampler until the sample is to be tested.

If the recovery of a thin walled tube sample is less than 12 inches in length, a split barrel sample shall be obtained. The cost of recovering the lost portion of thin walled tube samples, when less than 12 inches is recovered, shall be included in the price for thin walled tube samples.

## **L. ENVIRONMENTAL SAMPLING (STANDARD BORINGS)**

If Photo Ionization Detector readings indicate the presence of volatile or semi-volatile compounds in the soil, soil samples will be collected by CITY's designated field representative for volatile and semi-volatile organic analyses using SW-846 Method 8260 and SW-846 Method 8270. CONSULTANT shall be responsible for providing the appropriate glass sample

jars, jar labels, and chilled cooler to store and transport the samples to the laboratory for testing. CONSULTANT shall be responsible for transportation of the cooler to the laboratory and for completing and reporting (Level II data) the analytical tests.

#### **M. BACKFILLING**

As required, grout for backfilling shall consist of equal parts cement and bentonite mixed with no more water than is required for proper placement. Cement shall conform to ASTM C150, Type 1. The grout shall be thoroughly mixed and shall be used before any stiffening occurs. The grout shall be placed by tremie starting from the bottom of the boring.

CONSULTANT shall verify that the backfill method complies with any government requirements.

If mud pits have been used during the drilling operations, they shall be completely backfilled with tamped soil backfill, which shall be compacted to a density equivalent to the natural density of the adjacent soil.

#### **N. WATER PRESSURE TESTING**

After completion of rock core borings, wireline packer testing shall be performed over the specified borehole depth intervals.

CONSULTANT shall provide the following:

Pump, water, high pressure, progressive cavity (Moyno type), capable of producing 50 gpm at 150 psi.

Meter, water (measures flow accurately to +/-0.1 gallon, calibrated).

Gauge, pressure (psi, calibrated, 1 psi graduation).

Nitrogen inflatable Packer system, pneumatic, capable of sealing the cored borehole, rated for minimum of 350 psi.

Nitrogen supply.

Tank, surge.

Valve bypass (for regulating water pressure).

Miscellaneous pipe fittings.

Hose, air, high pressure (1/4" I.D.).

Nitrogen cylinder with pressure regulator and two pressures gauges.

Pressure transducer with sufficient cable length to place the transducer in the test interval.

Read-out box to measure the pressures at the transducer, in psi.

100 ft. tape.

Drill rig and crew equipped with all required hand tools, pipe, vise, etc.

Sufficient clean water to complete each test without interruption.

The professional in charge of the water pressure test operations is responsible for obtaining all necessary information and for performing such tests correctly. Any measurements of doubtful accuracy shall be noted, along with a description of the questionable aspects. Under the direction of CITY's designated field representative, testing should be continued until all uncertainties or contradictions have been resolved.

Criteria for locating water pressure test sections in a borehole will be established by CITY's designated field representative. Pneumatically expandable packer units are required, and mechanically expandable units shall not be used, because of the superior pressure seal between the packer and borehole wall created by the pneumatic unit.

Downhole pressure transducer placed in the middle of the test interval shall be required. The first test zone in the water pressure testing sequence shall be conducted in the borehole at the greatest depth below ground surface. Subsequent test zones shall proceed in sequence up the borehole at progressively shallower depths. A surge tank is required to be used in performing water pressure tests. The surge tank insures that a constant non-pulsating flow of water is pumped into the test section during the duration of testing.

In the event that CONSULTANT supplying the gauges, meters and testing equipment cannot provide recent calibration charts for the various items, CITY's designated field representative may require field or laboratory calibration tests on the applicable items (refer to Calibration Procedures).

### **Packer Test Calibration and Borehole Preparation**

Recent calibration certificates by an authorized laboratory must accompany all water meters, transducers, read-out boxes, and pressure gauges.

Advance the holes and casing through all the overburden soils and seat casing in bedrock. Drill the bedrock portion of the borehole with a HQ size core barrel. Flush the borehole with clean fresh water, until all the cuttings are removed. If an organic drilling fluid had been approved by CITY and used, Johnson's "Fast-Break" or an equivalent acceptable to CITY shall be added to the borehole prior to pressure testing in accordance with the manufacturer's recommendations.

Evaluate the type and quality of the rock cored, considering the presence of any discontinuities that could affect the test procedures or results.

CITY's designated field representative will determine the allowable Baseline Pressure Level (PBL) for each test in order to avoid hydrofracturing or dislocations in the rock mass. Do not exceed the PBL during testing, however it may be reduced, depending on the physical condition of the rock mass in the test zone as well as in the packer sealing areas.

The PBL will vary with each test, as it is directly relate to the test depth below ground surface. Existing or proposed hydrologic conditions in the test area also affect the PBL. Under normal conditions the PBL is calculated as follows:

$$PBL = LR * K + LS * 0.5$$

LR = depth below top of rock to the midpoint of the test zone

LS = thickness of soil cover above top of rock

In general, the PBL is calculated as 1.0 psi per foot of rock cover and 0.5 psi per foot of soil cover above the middle of the interval being tested.

The constant, K, is a function of rock type and quality well as of the vertical stress and static water pressure at the test zone. If the bedrock is of good quality (RQD = 75% to 100%) the constant K = 1; however, if bedrock is of low quality (RQD = 0 to 50%) the constant K should be less than 1.0. When testing in concrete or cemented blocks the value of K should vary between 0.5 and 0.75 as precaution against washing out old and possibly friable cementation. Generally one constant may be calculated for a specific project, but major site variations may require a "Variable Constant" for each test location. CITY's designated field representative will determine the constant to be used for the specific site situation. Record all pertinent data.

### **Packer Test Procedures**

- a. Lower the test apparatus to the desired depth for testing as determined by CITY's designated field representative. After making all water and pneumatic connections, run pump until water return in the casing is observed to be free of air bubbles. This is done in order to purge the entire system of air. Failure to do so may cause, under certain conditions, the compression of the air left in the system, and water will appear to be flowing into the rock while it is only compressing the air.

- b. The spacing between the packers is typically within 10 feet; however, this spacing may be adjusted in the field by CITY's designated field representative to meet the requirements of the specific test.
- c. The applied packer assembly pressure is variable, subject to equipment type, rock quality and static water pressures. Hard rubber inflatable packers (Lynes type) are inflated in the range from 150 to 600 psi. Soft rubber packers (Damco type) are inflated in the range from 100 to 300 psi.
- d. The water pressure test is conducted according to the Lugeon pattern of data collection. Pump water under pressure into the portion of the borehole to be tested. Adjust the water pressure to pressures of 1/2 (low pressure) and 3/4 (medium pressure) of the PBL and record water flow readings every minute for 5 minutes for each of the low and medium pressures. Adjust the water pressure to the PBL peak pressure and again hold for 5 minutes with water flow readings every minute. Repeat the procedure of recording the water flow with elapsed time descending order for high to low pressure after reaching PBL.
- e. During any of the test stages outlined above, if water is observed to flow from top of casing, or the entire test apparatus tends to move in the borehole, it is an indication of leakage of water between the packers and the rock walls of the borehole. In that event, increase pneumatic seal pressure while continuing to pump water until the flow over the top of the casing is completely stopped. If bubbles are observed, it is an indication of gas leaking from packers or conduits, necessitating removal of test assembly from borehole to correct the problem. Occasionally the discontinuities in the rock mass, such as open joints, may transmit water upwards and into the casing. If such a flow persists following an increase in the pneumatic seal pressure it is considered an intake by the rock mass.
- f. Water pressure tests should be run using clean water in order to minimize friction losses in the system, and through the rock mass. Record all irregularities that may occur during the test, such as leakage, running out of water, etc.
- g. If leakage of water from the test section into the surrounding rock is so great that the PBL cannot be reached, run the pump at its full capacity with the bypass valve closed: record the amount of water pumped into the test section, at 60-second intervals, with associated pressure readings for a minimum of 5 minutes.
- h. If rock in test section will not "take" water at PBL, check conditions in vicinity for any indications of unusually high hydrostatic pressure, i.e. artesian condition or nearby high surface water level. However, in most cases the rock mass will not take water because of the general tightness of the discontinuities. If water take does not occur at any of the Test pressures (1/2 and 3/4 of PBL, and PBL), the test may be terminated without following the descending order of pressure. If water take occurs in any of the test pressures, the entire cycle of ascending and descending test pressures must be performed.
- i. Upon completion of the test, deflate the packers while the water pump is running and allow one or two minutes of water flow. Observe the water meter (gallons) and be sure there is an unrestricted flow through the system. This is especially important during the winter months since water may freeze inside the meter under no-flow conditions. Under no circumstances shall regular automotive-type antifreeze be used. It is detrimental both to the environment and to the testing equipment. A special antifreeze is commercially available and may be used as approved by CITY.
- j. If the test does not produce desired pressure and flow information, advise CITY's designated field representative before demobilizing from site.

## **O. PIEZOMETER INSTALLATION**

CONSULTANT shall furnish or subcontract all labor, materials, and equipment for completing the installation of piezometers as specified herein.

Piezometers shall be installed in accordance with ASTM D5092 and as described below. Risers for piezometers shall consist of 2-inch diameter, or as agreed to by CITY's designated field representative, Schedule 80 PVC pipe or other material

acceptable to CITY's designated field representative. The lower 10 feet of each riser for the overburden piezometers and lower 30 feet for the bedrock piezometer listed in Table 1 shall be slotted screen section with 0.01 inch wide slots. The bottom of each riser shall be capped.

Bedrock borings shall be reamed to at least 3-7/8 inches prior to installation of 2-inch piezometers.

PVC pipe sections shall be joined using water tight, threaded flush joints that are acceptable to CITY's designated field representative. Glued joints are not acceptable.

Bentonite drilling mud shall not be used to advance a piezometer borehole. An equivalent organic polymer drilling fluid acceptable to CITY or CITY's designated field representative may be used, provided that the manufacturer's directions are carefully followed. If any drilling fluid other than clear water is used, the borehole shall be pressure washed using side discharge bits.

Sand shall be used as filter pack around the slotted section and shall extend 3 feet above the slotted section. The sand shall extend 12 inches below the bottom of the riser pipe for piezometers. Sand shall be placed in a slow, steady stream around the piezometer. Sand shall be washed silica sand that is appropriate for use with a 10-slot screen and has a uniformity coefficient less than 2.5.

Directly above the filter pack shall be a 24-inch impervious clay bentonite pellet seal and above the bentonite seal, the entire length of the piezometer shall be backfilled to the ground surface with cement-bentonite grout.

Each well installation shall be provided with a flush mounted traffic-rated locking enclosure to secure the well head. All padlocks for the well enclosures shall be keyed alike and the keys provided to CITY's designated field representative upon well completion. The flush-mounted enclosure shall consist of a flat cast-iron threaded, removable cover; a threaded, cast-iron outer ring; and a steel or cast-iron skirt. The protective enclosure shall be a Brianard-Kilman Model TC-253, or equivalent. The removable cover shall screw onto the outer ring, and a gasket shall provide a watertight seal between the cover and ring. The cover shall be designed so a special tool is required to remove it. CONSULTANT shall provide CITY's designated field representative with two tools required to open and close the cover. The enclosure shall be embedded below the ground surface and the top of the enclosure shall be 1 inch above existing grade. In addition, CONSULTANT shall permanently label the well enclosure with the well number on the outer ring surface using a metal stamp and on the inside of the enclosure with metal tags.

An 18-inch square-formed diameter structural concrete surface seal shall be placed from a depth of 12 inches to the top of the flush-mounted cover. The concrete shall slope away from the cover and shall be finished with a smooth uniform surface using a trowel or float. The piezometer identification number shall be etched in the concrete of the front facing right-hand corner, as indicated by CITY's designated field representative. Pressure treated wood forms are acceptable to construct the 18-inch square forms for the finished concrete pads, but must be removed after concrete has cured. Areas around the pad must be backfilled with soil to the top of the concrete pad.

Following installation of the piezometer, filter pack, and backfilling to the ground surface, the piezometer shall be developed by air lifting or pumping until the discharge water is clear as determined by CITY's designated field representative and soundings indicate all loose material has been removed from the piezometer. If an organic drilling fluid had been approved by CITY or CITY's designated field representative and used, Johnson's "Fast-Break" or an equivalent acceptable to CITY or CITY's designated field representative shall be added to the piezometer prior to development in accordance with the manufacturer's recommendations. CONSULTANT shall measure the water level in each piezometer 24 hours after completion, and provide to CITY's designated field representative immediately.

## **P. WATER**

CONSULTANT shall furnish all water required for drilling and other Work as required. No separate payment will be made for water or for time spent getting water. All water used shall be free from oil, acids, organic materials, or other deleterious substances.

## Q. DISCHARGE WATER

Discharge water from the boring operations shall be conveyed to natural drainage by piping or ditches acceptable to CITY's designated field representative. CONSULTANT shall ensure that discharging of water shall be in accordance with all federal, state, and local requirements. At the conclusion of the Work, CONSULTANT shall repair all erosion damage caused by the discharge water and restore ditches and other drainage facilities to their original condition.

## R. CLEANUP

At the conclusion of the Work at each Work location, CONSULTANT shall remove all equipment, tools, material, and supplies, and shall leave the site clean and clear of all debris generated by his Work and restore the site to its original condition.

## S. LABORATORY TESTING

Unless otherwise permitted by CITY or CITY's designated field representative, each laboratory test shall be performed as specified in the laboratory test standards specified hereinafter. Test results shall be reported on forms suitable for reproduction and shall be as acceptable to CITY's designated field representative. Hand written laboratory test results will not be acceptable. All original laboratory test data and calculation sheets shall be submitted to CITY's designated field representative. All final reports of test results shall be in English.

Samples to be tested will be selected by CITY's designated field representative after completion of the drilling. CONSULTANT shall be responsible for delivering the test samples to the laboratory.

### Laboratory Testing for Soil Samples

- a. Moisture Content – Moisture content determination shall be as specified in ASTM D2216.
- b. Atterberg Limits – Atterberg limits shall be as specified in ASTM D4318. The liquid limit shall be determined by securing the results of at least three trials. The test report shall include initial moisture content.
- c. Grain Size Analysis – Grain size analysis shall be as specified in ASTM D422, with sample preparation by ASTM D2217 (wet preparation method), Procedure B. This test is a complete sieve analysis, not just a measurement of the percent finer than the number 200 sieve. This test does not include a hydrometer analysis. If CITY's designated field representative requires hydrometer analyses, they will be requested separately. Reports of the results of this test shall include data and a graph of the data.
- d. Hydrometer Analysis – Hydrometer analysis shall be as specified in ASTM D422, with sample preparation by ASTM D2217 (wet preparation method), Procedure B. Reports of the results of this test shall include data and a graph of the data. This test does not include a sieve analysis for the portion of the soil larger than a No. 200 Sieve. If CITY's designated field representative requires sieve analyses, they will be requested separately.
- e. Consolidation – Consolidation tests shall be as specified in ASTM D2435 except as specified herein. Loading increments shall be as required by CITY's designated field representative upon assignment of the test. Each consolidation test shall include one rebound and reload cycle. When the specimen is saturated, if the specimen begins to expand the load shall be increased as required to hold the specimen at its original height. The test report shall include the log of time versus deformation plot for each load increment.
- f. Unconfined Compression - Soil – Unconfined compression tests of cohesive soil shall be as specified in ASTM D2166. The unconfined compression test on soils shall be performed using controlled strain procedure. The test report shall include a plot of stress versus strain.

- g. Extrude and Log Thin Walled Tube Sample – Select thin walled tube samples shall be extruded in the laboratory and a sample description shall be prepared as requested by CITY’s designated field representative. The sample description shall include the measured length of sample recovered and a visual classification of the sample in accordance with ASTM D2488. Other laboratory tests may be performed on the extruded samples as requested by CITY’s designated field representative. The extruded samples shall be protected against disturbance and loss of moisture after extrusion and prior to additional testing.
- h. Chemical Analysis - Chemical analysis of samples selected by the City’s designated field representative shall be by US Environmental Protection Agency (EPA) methods. Chemical analysis shall include percent chlorides (EPA method 9038) and percent sulfates (EPA method 325.3) and as required for the Phase 2 ESAs.
- i. Environmental Analysis – Environmental analysis of samples selected by CITY’s designated field representative shall be analyzed for volatile organic analysis by SW-846 Method 8260 and semi-volatile analysis by SW-846 Method 8270.

**Laboratory Testing for Rock Core**

- a. Unconfined Compression – Unconfined compression tests of rock cores shall be as specified in ASTM D2938 at the natural moisture content of the rock. The test report shall include initial dry unit weight, initial moisture content, and a plot of stress versus strain.
- b. Moisture Content – Moisture content determination shall be as specified in ASTM D2216.
- c. Rock Moduli in Uniaxial Compression – The deformation moduli of rock cores shall be determined at the natural moisture content as specified in ASTM D3148. The test report shall include initial dry unit weight, initial moisture content, and plots of stress versus strains.
- d. Bulk Density – Bulk density determination for rock cores procedure shall be as described in “Suggested Methods for Rock Characterization, Testing and Monitoring,” by the International Society of Rock Mechanics Commission on Testing Materials, 1981.
- e. Splitting Tensile Strength – The splitting tensile strength (Brazilian Test) of rock cores shall be as specified in ASTM D3967.
- f. Slake Durability Test – Slake durability tests on rock cores shall be as specified in ASTM D4544.
- g. Direct Shear Strength – Direct shear strength tests on rock cores shall be as specified in ASTM D5607-95.

**T. BORING AND PIEZOMETER LOGS**

CITY’s designated field representative will prepare boring, piezometer, and water pressure testing logs. CONSULTANT shall assist CITY’s engineering representative in obtaining and containerizing samples; boxing, labeling, preserving, and photographing cores; and monitoring and recording test data. Copies of the logs will be made available to CONSULTANT upon request.

**U. REPORTS**

A data report containing only the final laboratory test reports shall be submitted to CITY’s designated field representative. Five bound and two unbound copies of the report shall be provided to CITY’s designated field representative. No other reports, such as a geotechnical engineering report, are required. Laboratory test results shall be reported to CITY’s designated field representative as specified in the Section S.

## **V. DECONTAMINATION**

Although not anticipated, CONSULTANT shall be prepared to decontaminate the equipment and materials needed to perform the boring Work in accordance with the requirements of this section should environmental contamination be encountered. CONSULTANT shall get paid the standby hourly rate for decontamination time, and reimbursement of disposal costs as agreed-to by CITY.

Following initial decontamination or intermediate decontamination, decontaminated equipment that touches the ground will be considered contaminated and shall require additional decontamination before use with no additional payment.

The detergent used for decontamination shall be Liquinox produced by Alconox, Inc., or an equivalent approved by CITY or CITY's designated field representative.

At completion of the Work and if contaminated material is discovered, a decontamination station will be required. Plastic sheeting and any solid or liquid residue remaining in the decontamination pad shall be managed as discussed in Section W.

### **Initial Decontamination**

The initial decontamination shall be performed by CONSULTANT in two separate phases.

The first phase of initial decontamination shall be performed before mobilizing the equipment to the site. In the first phase of initial decontamination, CONSULTANT shall thoroughly clean the equipment required to drill the borings and to construct and develop the wells using a high-pressure wash with potable water to remove any encrusted soil, mud, or organic matter which may adhere to the equipment and well construction materials. This will include, but not be limited to, the drill rig, pumps, drill rods, augers, drill bits, threads, casing, sampling equipment, and other tools and materials required to perform the Work.

Riser pipe, screen, bailers, nylon retrieval cord, and top and bottom caps for the wells shall be decontaminated as required. If the factory packaging around the riser pipe, screen, bailers, retrieval cord, and caps has not been opened before use, decontamination shall not be performed; however, if the factory packaging has been removed or opened before use, the riser pipe, well screen, bailer, retrieval cord, or caps shall be decontaminated.

The second phase of initial decontamination shall be performed with CONSULTANT provided equipment and materials at the decontamination station located onsite, and shall be performed following mobilization of equipment and materials to the site, and before performing any Work. The following decontamination procedure shall be used for the second phase of initial decontamination for sampling equipment:

- Wash sampling equipment with high-pressure steam cleaner using laboratory detergent and potable water.
- Rinse sampling equipment with high-pressure steam cleaner using potable water.
- Rinse with reagent grade ethanol or isopropanol if grease or oil is observed on sampling equipment.
- Rinse with high-pressure steam cleaning using potable water.
- Allow sampling equipment to air dry.
- Wrap sampling equipment in aluminum foil, if necessary, to prevent contamination before use.

The second phase of initial decontamination for drilling equipment shall consist of the following:

- Wash with a high pressure steam cleaner using laboratory detergent and potable water.
- Rinse with high pressure steam cleaner using potable water.
- If necessary, rinse with reagent grade ethanol or isopropanol.
- Rinse with high-pressure steam cleaner using potable water.

All spent decontamination solutions from the second phase of initial decontamination shall be collected and managed by CONSULTANT in accordance with Section W.

### **Intermediate Decontamination**

Intermediate decontamination shall be performed by CONSULTANT to prevent cross contamination of split barrel, continuous barrel, and thin-walled tube samples, core barrels, wells, and borings. Intermediate decontamination of the sampling equipment shall be required between sampling attempts, as well as between different boring locations. The intermediate decontamination procedures for sampling, equipment are the same as those outlined in the second phase of initial decontamination.

The procedure used during the second phase of initial decontamination for drilling equipment shall also be used for intermediate decontamination.

Due to the contamination that may be encountered, a more intense procedure may be required to perform intermediate decontamination of drilling and sampling tools and equipment. The decontamination procedure for drilling equipment that cannot be decontaminated using the standard procedure outlined in Section XXIII shall consist of the following:

- Remove soil with high pressure steam cleaner using potable water.
- Wash with ethanol or stoddard solvent to remove visible contamination from the equipment.
- Wash with a high pressure steam cleaner using laboratory detergent and potable water.
- Rinse with high-pressure steam cleaner using potable water.

The decontamination procedure for sampling equipment that cannot be decontaminated using the standard procedure will consist of the following:

- Remove soil with high-pressure steam cleaner using potable water.
- Wash with ethanol or stoddard solvent to remove visible contamination from the equipment.
- Wash with high pressure steam cleaner using laboratory detergent and potable water.
- Rinse with high-pressure steam cleaner using potable water.
- Rinse with reagent grade ethanol or isopropanol.
- Rinse with distilled water.

No payment will be made for intermediate decontamination of sampling or coring equipment.

All spent decontamination solutions shall be collected and managed by CONSULTANT in accordance with Section W.

Decontamination of equipment between monitoring wells and borings shall include, but not be limited to, augers, drill rods, drill bits, threads, casing, hoses and pump for well development, and all other tools that might contaminate the soil, bedrock, or water samples. Decontamination of equipment between split barrel, core barrel, continuous barrel, and thin-walled tube samples, shall include, but not be limited to, the split barrel sampler, core barrel, continuous barrel sampler, the thin-walled sampling head, and all other equipment that might be contaminated in the sampling process.

### **Final Decontamination**

Final decontamination shall be required to prevent movement of contaminants to areas offsite, and shall be performed before demobilizing the equipment. Final decontamination shall be performed at the decontamination station located onsite.

For final decontamination, CONSULTANT shall follow the decontamination procedure set forth for intermediate decontamination in Section W. All spent decontamination solutions shall be managed by CONSULTANT in accordance with Section W. Final decontamination of equipment shall include, but not be limited to, the drill rigs, pumps, core barrel, drill rods, drill bits, threads, casing, sampling equipment, and all other tools that might have been contaminated during the Work.

## **W. MANAGEMENT OF INVESTIGATION DERIVED WASTE**

Investigation derived waste (IDW) (i.e., drill cuttings, fluids, plastic sheeting, contaminated disposable sampling equipment that cannot be reasonably decontaminated, and contaminated disposable health and safety materials) shall be segregated according to material type and placed in UN1A2/Y1.2/100 55-gallon drums. Drill cuttings shall be segregated according to location. No free liquids or any plastic, wood, or other non-soil materials shall be placed in any drum containing drill cuttings.

Decontamination fluids, groundwater removed from wells during development and purging, and liquid source materials removed from source areas during sampling shall be placed in UN1A2/Y1.2/100 55-gallon drums. Solid material shall not be added to any drum designated for liquid disposal. When filling these drums, at least 6 inches of freeboard shall be allowed. These drums shall have a new gasket. At completion of filling, these drums shall be closed, tipped to a 45-degree angle to verify the presence of a leak-proof closure.

All drums shall be labeled by CITY's designated field representative. After the drums are labeled, they shall be staged onsite by CONSULTANT at a location designated by CITY's designated field representative. The drums shall be placed on pallets supplied by CONSULTANT. The drums shall be staged so that drums in the middle of the staging area can be accessed by walking between the drums. The staged drums shall be covered with a tarpulin(s) supplied by CONSULTANT. The tarpulin(s) shall be heavy-duty and waterproof. The tarpulin(s) shall be secured by CONSULTANT in a manner acceptable to CITY's designated field representative to prevent the tarpulin(s) from blowing off the drums and allowing water to accumulate on the drums.

Descriptive data on the UN1A2/Y12/100 55-gallon drums, the spray-on epoxy-phenolic lining for the drums, method of the collection of material, and the transport of the drums to the staging area shall be submitted by CONSULTANT for review by CITY's designated field representative.

## **X. BORING CORES AND SAMPLES**

CONSULTANT shall transport, load and unload, and store cores at a CITY-designated facility, as directed by CITY's designated field representative. CONSULTANT shall assist CITY's designated field representative with opening and closing core boxes and stacking the boxes as directed by CITY's designated field representative.

## **Y. SCHEDULE**

NTP  
Completion Date

August 30, 2013  
4 months after NTP

## **PART II**

### **CITY'S RESPONSIBILITIES**

CITY shall, at its expense, do the following in a timely manner so as not to delay the services:

#### **A. INFORMATION REPORTS**

Make available to CONSULTANT a copy of the approved Phase II PIRS Geotechnical Investigation Work Plan.

#### **B. REPRESENTATIVE**

Designate a representative for the project who shall have the authority to transmit instructions, receive information, interpret and define CITY's requirements and make decisions with respect to the Services. CITY representative for this Agreement will be Kelly Bajic, P.E (PROGRAM MANAGER).

#### **C. DECISIONS**

Provide all criteria and full information as to CITY's requirements for the Services, and make decisions on matters relating to the Services within two weeks of written correspondence.

#### **D. PROPERTY OWNER NOTIFICATION**

Property owner survey and geotechnical boring notification letters will be prepared and mailed by others, as applicable.

**PART III**  
**COMPENSATION**

**A. COMPENSATION**

CONSULTANT agrees to perform the work covered by this Agreement for the unit prices stated in Attachment 1, which prices are understood and agreed to be the basis of compensation for all work performed under this Agreement. Compensation will be based on extending the unit prices by the actual quantities of work completed. All work not specifically set forth as a pay item in the unit prices shall be considered a subsidiary obligation of CONSULTANT and all costs in connection therewith shall be included in the unit prices. Lump sum items shall be paid based on percentage complete as agreed-to by CITY. The total not-to-exceed value of this Agreement is **\$161,970.00** as summarized in attached Attachment 1.

Payment for outside consulting and/or professional services performed by a Subconsultant will be at cost to CONSULTANT plus 10 percent for administrative costs. CONSULTANT will obtain written CITY approval before authorizing these services.

**B. BILLING AND PAYMENT**

1. Timing/Format

- a. CONSULTANT shall invoice CITY monthly for Services completed at the time of billing. Such invoices shall be prepared in a form and supported by documentation as CITY may reasonably require.
- b. CITY shall pay CONSULTANT within 30 days of receipt of approved invoice.

2. Billing Records

CONSULTANT shall maintain accounting records of its costs in accordance with generally accepted accounting practices. Access to such records shall be provided during normal business hours with reasonable notice during the term of this Agreement and for 3 years after completion.

## PART IV STANDARD TERMS AND CONDITIONS

1. **STANDARD OF CARE.** Services shall be performed in accordance with the standard of professional practice ordinarily exercised by the applicable profession at the time and within the locality where the services are performed. No warranty or guarantee, express or implied, are provided, including warranties or guarantees contained in any uniform commercial code.

2. **CHANGE OF SCOPE.** The scope of Services set forth in this Agreement is based on facts known at the time of execution of this Agreement, including, if applicable, information supplied by ENGINEER and CITY. ENGINEER will promptly notify CITY of any perceived changes of scope in writing and the parties shall negotiate modifications to this Agreement.

3. **SAFETY.** ENGINEER shall establish and maintain programs and procedures for the safety of its employees. ENGINEER specifically disclaims any authority or responsibility for general job site safety and safety of persons other than ENGINEER employees.

4. **DELAYS.** If events beyond the control of ENGINEER, including, but not limited to, fire, flood, explosion, riot, strike, war, process shutdown, act of God or the public enemy, and act or regulation of any government agency, result in delay to any schedule established in this Agreement, such schedule shall be extended for a period equal to the delay. In the event such delay exceeds 90 days, ENGINEER will be entitled to an equitable adjustment in compensation.

5. **TERMINATION/SUSPENSION.** Either party may terminate this Agreement upon 30 days written notice to the other party in the event of substantial failure by the other party to perform in accordance with its obligations under this Agreement through no fault of the terminating party. CITY shall pay ENGINEER for all Services, including profit relating thereto, rendered prior to termination, plus any expenses of termination.

ENGINEER or CITY, for purposes of convenience, may at any time by written notice terminate the services under this Agreement. In the event of such termination, ENGINEER shall be paid for all authorized services rendered prior to termination including reasonable profit and expenses relating thereto.

6. **REUSE OF PROJECT DELIVERABLES.** Reuse of any documents or other deliverables, including electronic media, pertaining to the Project by CITY for any purpose other than that for which such documents or deliverables were originally prepared, or alternation of such documents or deliverables without written verification or adaptation by ENGINEER for the specific purpose intended, shall be at CITY's sole risk.

7. **OPINIONS OF CONSTRUCTION COST.** Any opinion of construction costs prepared by ENGINEER is supplied for the general guidance of the CITY only. Since ENGINEER has no control over competitive bidding or market conditions, ENGINEER cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to CITY.

8. **RELATIONSHIP WITH CONTRACTORS.** ENGINEER shall serve as CITY's professional representative for the Services, and may make recommendations to CITY concerning actions relating to CITY's contractors, but ENGINEER specifically disclaims any authority to direct or supervise the means, methods, techniques, sequences or procedures of construction selected by CITY's contractors.

9. **MODIFICATION.** This Agreement, upon execution by both parties hereto, can be modified only by a written instrument signed by both parties.

10. **PROPRIETARY INFORMATION.** Information relating to the Project, unless in the public domain, shall be kept confidential by ENGINEER and shall not be made available to third parties without written consent of CITY.

11. **INSURANCE.** ENGINEER shall maintain in full force and effect during the performance of the Services the following insurance coverage; provided, however, that if a High Risk Insurance Attachment is attached hereto, the requirements of the High Risk Insurance Attachment shall be substituted in lieu of the following requirements;

- a) Worker's Compensation per statutory requirements
- b) General Liability \$1,000,000 minimum per occurrence/ \$1,000,000 aggregate (if the value of the projects exceeds \$10,000,000 then this shall be \$5,000,000 aggregate).
- c) Automobile Liability \$1,000,000 per occurrence
- d) Products Liability \$1,000,000 per occurrence
- e) Completed Operations Liability \$1,000,000 minimum per occurrence

The Certificate of Insurance must show the City of Fort Wayne, its Divisions and Subsidiaries as an Additional Insured and a Certificate Holder, with 30 days

notification of cancellation or non-renewal. All Certificates of Insurance should be sent to the following address:

City of Fort Wayne Purchasing Department  
200 East Berry Street, Suite 490  
Fort Wayne, IN 46802

12. **INDEMNITIES.** To the fullest extent permitted by law, ENGINEER shall indemnify and save harmless the City from and against loss, liability, and damages sustained by CITY, its agents, employees, and representatives by reason of injury or death to persons or damage to tangible property to the extent caused directly by the negligent errors or omissions of ENGINEER, its agents or employees.

13. **LIMITATIONS OF LIABILITY.** Each party's liability to the other for any loss, cost, claim, liability, damage, or expense (including attorneys' fees) relating to or arising out of any negligent act or omission in its performance of obligations arising out of this Agreement, shall be limited to the amount of direct damage actually incurred. Absent gross negligence or knowing and willful misconduct which causes a loss, neither party shall be liable to the other for any indirect, special or consequential damage of any kind whatsoever.

14. **ASSIGNMENT.** The rights and obligations of this Agreement cannot be assigned by either party without written permission of the other party. This Agreement shall be binding upon and insure to the benefit of any permitted assigns.

15. **ACCESS.** CITY shall provide ENGINEER safe access to any premises necessary for ENGINEER to provide the Services.

16. **PREVAILING PARTY LITIGATION COSTS.** In the event any actions are brought to enforce this Agreement, the prevailing party shall be entitled to collect its litigation costs from the other party.

17. **NO WAIVER.** No waiver by either party of any default by the other party in the performance of any particular section of this Agreement shall invalidate another section of this Agreement or operate as a waiver of any future default, whether like or different in character.

18. **SEVERABILITY.** The various term, provisions and covenants herein contained shall be deemed to be separate and severable, and the invalidity or unenforceability of any of them shall not affect or impair the validity or enforceability of the remainder.

19. **AUTHORITY.** The persons signing this Agreement warrant that they have the authority to sign as, or on behalf of, the part for whom they are signing.

20. **STATUTE OF LIMITATION.** To the fullest extent permitted by law, parties agree that, except for claims for indemnification, the time period for bringing claims regarding ENGINEER's performance under this Agreement shall expire one year after Project Completion.

21. **CONSENT DECREE NOTIFICATION.** ENGINEER shall perform, or cause others to perform, all services undertaken in connection with this Agreement in a good and workman-like manner and in conformance with the terms of the Consent Decree entered in the U.S District Court on April 1, 2008 by the United States and State of Indiana. ENGINEER acknowledges that it has been provided a complete copy of the Consent Decree which can be viewed at: [http://www.cityoffortwayne.org/utilities/images/stories/docs/consent\\_decree/Consent\\_Decree.pdf](http://www.cityoffortwayne.org/utilities/images/stories/docs/consent_decree/Consent_Decree.pdf)

22. **DOCUMENT RETENTION.** Notwithstanding any other provision of this Agreement, ENGINEER agrees to preserve all non-identical copies of all documents, records and other information (whether in physical or electronic form) within ENGINEER's possession or control and which relate, in any manner, to the performance of the services undertaken in connection with this Agreement for a period of 1 year after the completion contemplated by the Agreement (the "Retention Period"). Prior to the end of the Retention Period, or at any earlier time if requested by the CITY, ENGINEER shall provide the CITY with complete copies of such documents, records and other information at no cost to the CITY. The copies shall be provided to the CITY on CD or DVD media, and individual files shall be in Adobe PDF format. The individual files shall be contained in a ZIP formatted file, and the filename of the ZIP shall include the name of the project and the ENGINEER. No part of any file shall be encrypted or protected from copying. Such copies shall be accompanied by a verified written statement from the ENGINEER attesting that it has provided the CITY with complete copies of all documents, records and other information which relates to the service contemplated by the Agreement.

**ATTACHMENT 1**

**FIELD AND LABORATORY WORK UNIT PRICES**

**FIELD WORK.**

<b>Item No.</b>	<b>Field Work</b>	<b>Units</b>	<b>Estimated Quantity</b>	<b>Unit Price (\$)</b>	<b>Total Price (\$)</b>
F1	Mobilizing drill rig for borings	per drill rig	1	\$3,500.00	\$3,500.00
F2	Rotary wash or auger boring, 0-50 foot depth	per linear ft	210	\$14.00	\$2,940.00
F3	Inclined Rotary wash or auger boring 0-50 foot depth	per linear ft	130	\$24.00	\$3,120.00
F4	Rotary wash or auger boring, over 50 foot depth	per linear ft	80	\$16.00	\$1,280.00
F5	Inclined Rotary wash or auger boring over 50 foot depth	per linear ft	0	\$26.00	-
F6	Core boring in rock, less than 100 foot depth	per linear ft	20	\$53.00	\$1,060.00
F7	Inclined Core boring in rock, 100-200 foot depth	per linear ft	40	\$63.00	\$2,520.00
F8	Core boring in rock, 100-200 foot depth	per linear ft	200	\$58.00	\$11,600.00
F9	Inclined Core boring in rock, 100-200 foot depth	per linear ft	200	\$68.00	\$13,600.00
F10	Core boring in rock, over 200 foot depth	per linear ft	185	\$68.00	\$12,580.00
F11	Inclined Core boring in rock, over 200 foot depth	per linear ft	210	\$78.00	\$16,380.00
F12	Split barrel sample	per sample	38	\$15.00	\$570.00
F13	Thin walled tube sample	per sample	4	\$75.00	\$300.00
F14	Set-up for water pressure testing	each	4	\$400.00	\$1,600.00
F15	Water pressure testing	per test	85	\$250.00	\$21,250.00
F16	Backfilling completed borehole with tremied grout	per linear ft	610	\$10.00	\$6,100.00
F17	Furnish and install temporary casing	per linear ft	340	\$16.00	\$5,440.00
F18	Reaming borehole for piezometer installation	per linear ft	0	\$0.00	\$0.00
F19	Piezometer installation	per linear ft	585	\$26.00	\$15,210.00
F20	Flush Mount Protective Cover for piezometers, installed	each	2	\$650.00	\$1,300.00
F21	Per diem	crew day	48	\$300.00	\$14,400.00
F22	Standby time	per hour	16	\$250.00	\$4,000.00
<b>Field Work Subtotal</b>					<b>\$138,750.00</b>

**LABORATORY WORK.**

Item No.	Laboratory Tests	Units	Estimated Quantity	Unit Price (\$)	Total Price (\$)
L1	Moisture content	per test	10	\$ 9.00	\$ 90.00
L2	Atterberg limits	per test	8	\$ 75.00	\$ 600.00
L3	Grain size analysis	per test	10	\$ 65.00	\$ 650.00
L4	Hydrometer analysis	per test	8	\$ 105.00	\$ 840.00
L5	Consolidation	per test	2	\$ 45.00	\$ 90.00
L6	Unconfined compression-soil	per test	2	\$ 75.00	\$ 150.00
L7	Extruded thin walled tube sample and provide sample description	per sample	4	\$ 65.00	\$ 260.00
L8	Chemical analysis of soil (sulfates and chlorides)	per test	2	\$ 120.00	\$ 240.00
L9	Environmental analysis (volatile and semi-volatile organics)	per test	2	\$ 790.00	\$ 1,580.00
L10	Rock core unconfined compression	per test	20	\$ 60.00	\$ 1,200.00
L11	Moisture Content (rock core)	per test	0	\$ 9.00	\$ -
L12	Rock moduli in uniaxial compression	per test	12	\$ 510.00	\$ 6,120.00
L13	Rock core bulk density	per test	16	\$ 25.00	\$ 400.00
L14	Splitting tensile strength of rock core	per test	20	\$ 100.00	\$ 2,000.00
L15	Slake durability test	per test	8	\$ 300.00	\$ 2,400.00
L16	Direct Shear Strength test	per test	12	\$ 550.00	\$ 6,600.00
<b>Laboratory Work Subtotal</b>					<b>\$ 23,220.00</b>

<b>TOTAL (Field Work and Laboratory Work)</b>	<b>\$161,970.00</b>
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**CITY OF FORT WAYNE, INDIANA**

**TesTech**

(Vendor Name)

**VENDOR DISCLOSURE STATEMENT RELATING TO:**

1. **FINANCIAL INTERESTS;**
2. **POTENTIAL CONFLICTS OF INTERESTS;**
3. **CURRENT AND PENDING CONTRACTS OR PROCUREMENTS**

Vendors desiring to enter into certain contracts with the City of Fort Wayne, Indiana (the "City") shall disclose their financial interests, potential conflicts of interest and current and pending contract or procurement information as set forth below.

The following disclosures by Vendors are required for all contracts with annual payments by the City in the amount of \$25,000 or more. Vendors shall disclose the financial interests, potential conflicts of interest and other contract and procurement information identified in Sections 1, 2 and 3 below as a prerequisite for consideration of an award of contract by the City. This Disclosure Statement must be completed and submitted together with Vendor's contract, bid, proposal, or offer.

A publicly traded entity may submit its current 10K disclosure filing in satisfaction of the disclosure requirements set forth in Sections 1 and 2 below.

**Section 1. Disclosure of Financial Interest in Vendor**

a. If any individuals have either of the following financial interests in Vendor (or its parent), please check all that apply and provide their names and addresses (attach additional pages as necessary):

(i) Equity ownership exceeding 5%

(ii) Distributable income share exceeding 5%

(iii) Not Applicable (If N/A, go to Section 2)

Name: Sherif Aziz, PE Name: \_\_\_\_\_

Address: 8534 Yankee St., Dayton, OH 45458 Address: \_\_\_\_\_

b. For each individual listed in Section 1a. show his/her type of equity ownership: sole proprietorship  stock  partnership interest  units (LLC)  other (explain) \_\_\_\_\_

c. For each individual listed in Section 1a. show the percentage of ownership interest in Vendor (or its parent):  
ownership interest: 100 %

**Section 2. Disclosure of Potential Conflicts of Interest (not applicable for vendors who file a 10K)**

For each individual listed in Section 1a. check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If "Yes", please describe using space under applicable subsection (attach additional pages as necessary):

a. City employment, currently or in the previous 3 years, including contractual employment for services. Yes \_\_\_\_\_ No. X

- b. City employment of "Member of Immediate Family" (defined herein as: spouse, parent, child or sibling) including contractual employment for services in the previous 3 years. Yes  No.
- c. Relationship to Member of Immediate Family holding elective City office currently or in the previous 3 years. Yes  No.
- d. Relationship to Member of Immediate Family holding appointive City office currently or in the the previous 3 years Yes  No

**Section 3. DISCLOSURE OF OTHER CONTRACT AND PROCUREMENT RELATED INFORMATION**

- a. Does Vendor have current contracts (including leases) with the City? Yes  No
- b. If "Yes", identify each current contract with descriptive information including purchase order or contract reference number, contract date and City contact using space below (attach additional pages as necessary).
- c. Does Vendor have pending contracts (including leases), bids, proposals, or other pending procurement relationship with the City? Yes  No.

If "Yes", identify each pending matter with descriptive information including bid or project number, contract date and City contact using space below (attach additional pages as necessary).

**Section 4. CERTIFICATION OF DISCLOSURES**

In connection with the disclosures contained in Sections 1, 2 and 3 Vendor hereby certifies that, except as described in attached Schedule A:

- a. Vendor (or its parent) has not, within the five (5) year period preceding the date of this Disclosure Statement, been debarred, suspended, proposed for debarment declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
- b. No officer or director of Vendor (or its parent) or individual listed in Section 1a. is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any offense;
- c. Vendor (or its parent) has not, within the five (5) year period preceding the date of this Disclosure Statement, had one or more public transactions (federal, state or local) terminated for cause or default;

\* TesTech, Inc., the parent company of TesTech Indiana, LLC, is no longer certified as a DBE by the Ohio Department of Transportation based on the letter received from Sarah S. Lee, DBE Program Manager, Ohio Department of Transportation dated August 1st, 2012.

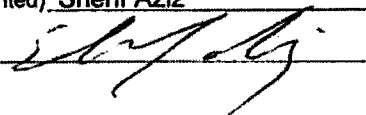
- d. No officer or director of Vendor (or its parent) or individual listed in Section 1a. has, within the five (5) year period preceding the date of this Disclosure Statement, been convicted, adjudged guilty, or found liable in any criminal or civil action instituted by the City, the federal or state government or any other unit of local government; and
- e. Vendor has read, understands and shall comply with the applicable requirements of the City of Fort Wayne, Indiana Ethics Ordinance; and
- f. Neither Vendor, nor its parent, nor any affiliated entity of Vendor, or any of their respective officers, directors, or individuals listed in Section 1a. is barred from contracting with any unit of any federal, state or local government as a result of engaging in or being convicted of: (i) bid-rigging; (ii) bid-rotating; or (iii) any similar federal or state offense that contains the same elements as the offense of bid-rigging or bid-rotating
- g. Pursuant to IC 5-22-16.5, Vendor hereby certifies they do NOT provide \$20 million dollars or more in goods or services to the energy sector of Iran. Vendor also certifies it is not a financial institution that extends \$20 million dollars or more in credit that will provide goods or services to the energy sector of Iran or extends \$20 million dollars or more in credit to a person identified on the list as a person engaging in investment activities in Iran.

The disclosures contained Sections 1, 2 and 3 and the foregoing Certifications are submitted by

TesTech  
(Name of Vendor)

4714 Parnell Ave., Fort Wayne, IN 46825  
Address  
260 918-2302  
Telephone  
aziz@testechinc.com  
E-Mail Address

The individual authorized to sign on behalf of Vendor represents that he/she: (a) is fully informed regarding the matters pertaining to Vendor and its business; (b) has adequate knowledge to make the above representations and disclosures concerning Vendor; and (c) certifies that the foregoing representations and disclosures are true and accurate to the best of his/her knowledge and belief.

Name (Printed) Sherif Aziz Title President  
Signature  Date 7-3-13

**NOTE: FAILURE TO COMPLETE AND RETURN THIS FORM WITH YOUR DOCUMENTATION MAY RESULT IN YOUR CONTRACT, OFFER, BID OR PROPOSAL BEING DISQUALIFIED FROM CONSIDERATION.**

**INDIANA LEGAL EMPLOYMENT DECLARATION**

The State of Indiana has enacted a law (I.C. 22-5-1.7) requiring all state agencies and political subdivisions request verification from their contractors that their employees are legally eligible to work in the United States. This Declaration serves as notice that all Contractors doing business with the City of Fort Wayne must, as a term of their contract:

1. Enroll in and verify the work eligibility status of newly hired employees of the contractor through the E-Verify programs (but is not required to do this if the E-Verify program no longer exists); and
2. Verify, by signature below, that the Contractor does not knowingly employ unauthorized aliens.

I, Sherif Aziz, PE, a duly authorized agent of TesTech (name of Company), declare under penalties of perjury that TesTech (name of Company) does not employ unauthorized aliens to the best of its knowledge and belief.

TesTech  
(Name of Company)  
By: [Signature]  
(Authorized Representative of Company)  
Sherif Aziz, PE, President

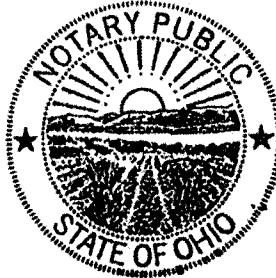
Subscribed and sworn to before me on this 9<sup>th</sup> day of July, 2013.

My Commission Expires: 3/31/2016

County of Residence: Montgomery

[Signature]  
Notary Public - Signature

Annette Hetzel  
Notary Public - Printed Name



ANNETTE HETZEL, Notary Public  
In and for the State of Ohio  
My Commission Expires March 31, 2016

**PLEASE SEE <https://e-verify.uscis.gov/enroll/StartPage.aspx?JS=YES> FOR INSTRUCTIONS AND ELECTRONIC REGISTRATION FOR E-VERIFY.**

# Interoffice Memo

Date: **August 8, 2013**

To: Common Council Members

From: Kelly Bajic, Program Manager, City Utilities Engineering

**RE: Contract Title: Three Rivers Protection & Overflow Reduction Tunnel (3RPORT) Additional Phase I Geotechnical Investigation W.O. #75918**

Consultant Selected: Tes Tech Inc.

Contract Value: \$161,970.00

The consultant shall provide: Professional geotechnical services to support the Phase 1 geotechnical investigation for the Three Rivers Protection & Overflow Reduction Tunnel or 3RPORT.

Project Description: The Long Tern Control Plan's Wayne Street and St. Mary's Parallel Interceptors, under control measure 11 and 12, are now identified as the Three Rivers Protection & Overflow Reduction Tunnel (3RPORT). The proposed tunnel will capture combined sewer overflows prior to discharging into the St. Marys and Maumee Rivers. The tunnel will then transport the combined sewerage to the Water Pollution Control Plant (WPCP) and store it at the Wet Weather Ponds until the plant has capacity to treat these flows. The LTCP's Parallel Interceptor Routing Study has identified potential routes for the 3RPORT. Decisions for the final route selection will be supported by the Phase I geotechnical investigation.

The general objective of this exploration program is to identify the significant features of the geological environment which will impact the proposed design, construction and alignment of the future tunnel. To date, two deep rock borings have been completed at the starting and the ending points of the potential routes. Additional geotechnical services are needed for deep rock borings within the main corridor to better determine the geology within this region. Geotechnical services will include executing field and laboratory investigations, performing test borings at the depth of 300 feet and in-situ testing required to further characterize the subsurface soils, rock and groundwater conditions.

Implications of not being approved: This work is an integral part of compliance with the Consent Decree, to reduce combined sewer overflows to the St. Marys River and Maumee River.

If Prior Approval is being Requested, Justify: n/a

Selection and Approval Process: An RFP (Request for Proposal) was issued through the City's Purchasing Department and was posted on the City's webpage under Public Bidding Opportunities. The RFP included a well-defined scope of services that was put together for these geotechnical services. Utilities Engineering received 4 sealed proposals through the Purchasing Department on July 11, 2013. The proposals were then scored by a review team based on a scoring matrix that was defined within the RFP. Using this procedure, Utilities Engineering chose TesTech for this project and also finds their not-to-exceed fee of \$161,920.00 to be the best value. The Board of Public Works approved the contract on August 7, 2013.

Funding: The Professional Services Agreement (PSA) will be funded by Sewer Revenue Bond.

**Council Introduction Date: August 13, 2013**

CC: BOW  
Matthew Wirtz  
Diane Brown  
Chrono  
File

Public Hearing Date, if applicable \_\_\_\_\_

Read the first time in full and on motion by Councilman John Shoaff  
Read the second time by title and referred to the City Utilities Committee  
Committee. Read the third time in full and on motion by Councilman  
Shoaff, placed on passage by the following vote:

	<u>AYES</u>	<u>NAYS</u>	<u>ABSTAINED</u>	<u>ABSENT</u>
<u>TOTAL VOTES</u>	<u>9</u>	_____	_____	_____
BENDER	<u>✓</u>	_____	_____	_____
CRAWFORD	<u>✓</u>	_____	_____	_____
DIDIER	<u>✓</u>	_____	_____	_____
HARPER	<u>✓</u>	_____	_____	_____
HINES	<u>✓</u>	_____	_____	_____
JEHL	<u>✓</u>	_____	_____	_____
PADDOCK	<u>✓</u>	_____	_____	_____
SHOAFF	<u>✓</u>	_____	_____	_____
SMITH	<u>✓</u>	_____	_____	_____

DATED: 8-27-13 Sandra E. Kennedy  
SANDRA E. KENNEDY, CITY CLERK

Passed and adopted by the Common Council of the City of Fort Wayne, Indiana, as  
(ANNEXATION) (APPROPRIATION) (GENERAL) (SPECIAL) (ZONING) ORDINANCE  
(RESOLUTION) NO. 3-75-13 on the 27<sup>th</sup> day of  
August, 2013

ATTEST:  
Sandra E. Kennedy  
SANDRA E. KENNEDY,  
CITY CLERK

T. Thomas F. Didier  
PRESIDING OFFICER

Presented by me to the Mayor of the City of Fort Wayne, Indiana, on the 30<sup>th</sup> day  
of August, 2013, at the hour of 11:30 o'clock A.M. E.S.T.

Sandra E. Kennedy  
SANDRA E. KENNEDY, CITY CLERK

Approved and signed by me this 3<sup>rd</sup> day of September  
2013, at the hour of 10:30 o'clock AM E.S.T.

Thomas C. Henry  
THOMAS C. HENRY, MAYOR

BILL NO. S-13-08-14

**REPORT OF THE COMMITTEE ON CITY UTILITIES**

**AUGUST 20, 2013**

**MITCH HARPER – CHAIR**  
**JOHN SHOAFF – CO-CHAIR**  
**ALL COUNCIL MEMBERS**

AN ORDINANCE approving Professional Services Agreement for Three Rivers Protection & Overflow Reduction Tunnel (3RPORT) Additional Phase I Geotechnical Investigations W.O. #75918 between TESTECH, Inc. and the City of Fort Wayne, Indiana, in connection with the Board of Public Works. **CITY UTILITIES COMMITTEE** HAVE HAD SAID ORDINANCE UNDER CONSIDERATION AND BEG LEAVE TO REPORT BACK TO THE COMMON COUNCIL THAT SAID ORDINANCE

DO PASS

DO NOT PASS

ABSTAIN

NO REC

*M.H.*  
*[Signature]*  
*[Signature]*  
*[Signature]*  
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SANDRA E. KENNEDY  
CITY CLERK