



November 25, 2019  
File NO. 05.P000411.20

Mr. Robert H. Skinner  
Chief Administrative Officer  
Canton Town Hall  
P.O. Box 168  
4 Market Street  
Collinsville, CT 06019

RE: Historical AFFF Discharge at Cherry Brook Primary School  
4 Barbourtown Road, Canton

Dear Mr. Skinner,

GZA GeoEnvironmental, Inc. (GZA) is pleased to submit this proposal for services to the Town of Canton to provide environmental consulting services at the Cherry Brook Primary School related to a historic fire training release of Aqueous Film Forming Foam (AFFF) containing Per- and Polyfluorinated Alkyl Substances (PFAS). These services are in response to a Connecticut Department of Energy and Environmental Protection (DEEP) letter dated November 15, 2019.

### Background

GZA understands that in 2014, fire training drills using AFFF were performed at two locations at the Cherry Brook Primary School. Based upon our conversations, approximately 40-gallons of the AFFF concentrate were mixed with approximately 1,300-gallons of water during the drills. Based upon the site map provided (attached), it appears there may have been two areas where the AFFF was discharged: 1) the grassy field area between the school's parking lot and Barbourtown Road (referred to as the "eastern field"); or 2) a grassy field south of the school building and north of a playscape (referred to as the "southern field").

GZA understands that the DEEP Bureau of Water Protection and Land Reuse Remediation Division sent the Town of Canton a letter, on November 15, 2019, requesting that the Town conduct additional investigations at the two AFFF release areas, evaluate sensitive receptors (potable water supply wells) and investigate the soil where the AFFF was released on the school grounds.

GZA understands that the Town has sampled the two existing potable water supply wells servicing the Cherry Brook Primary School. The results of the sampling are pending. In the interim, the Town is providing approximately 2,000-gallons of potable water supply per day using a tanker that is refilled daily for potable water to the School.



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## **GZA QUALIFICATIONS AND EXPERIENCE**

GZA is a multidisciplinary firm with over 700 employees in 31-offices including two offices in Connecticut (Glastonbury and Trumbull) with multiple Licensed Environmental Professionals (LEPs). GZA offers a wide range of environmental services including regulatory approved investigation plans, the implementation of soil and groundwater investigations including groundwater monitoring, development of remedial action plans including evaluations of wetlands impacted by contamination, and implementing remedial actions resulting in compliance with the Connecticut Remedial Standard Regulations (RSRs). GZA currently has a contract with the Connecticut Department of Administrative Services (DSA) which can be utilized by local municipalities.

GZA has been on the forefront of the PFAS issues and is actively, or has worked on, over 30-PFAS sites in 10-states. GZA has attended all the CT PFAS Task Force Committee meetings and participated in these meeting which were the basis for the Connecticut's PFAS Action Plan that was submitted to the Governor on November 1<sup>st</sup>. GZA has been members of the Interstate Technology and Regulatory Council (ITRC) PFAS Team over the past three years and provided financial support during their initial start-up, due to funding cuts. ITRC has provided PFAS fact sheets on various topics and the final PFAS document is to be issued early 2020. GZA also has active members on the National Ground Water Association (NGWA) and ASTM International helping in the development of their PFAS guidance documents.

Because these PFAS compounds are ubiquitous in the environment and the regulatory action levels are reported in the parts per trillion, GZA has developed stringent Standard Operating Procedures (SOPs), consistent with the USEPA to reduce the potential for false positives. GZA has also reviewed various laboratories procedures and have qualify laboratories to perform these PFAS analysis (does the laboratory have significant experience, provide reproducible results and report their data with minimum data quality control issues). GZA believes that by providing qualified laboratories and using stringent SOPs, it will reduce the potential for false positives and improve the reliability of the data; especially because we are dealing with private water supplies. GZA also has a team of toxicologists who have prepared a technical White Paper (Attachment) providing information on PFAS toxicity and the variability of the various state drinking water guidelines for PFAS compounds.

## **SCOPE OF SERVICES**

GZA has developed our scope of work to meet the requested tasks by DEEP letter dated November 15, 2019. In general, this scope of work will address:

- GZA will provide a work plan and schedule of activities for the Town to submit to the DEEP;
- GZA will coordinate with the Town to collect a water sample from those wells identified within the 500-foot well receptor survey;
- GZA will conduct a subsurface soil investigation within the two areas identified on the attached map;
- GZA will prepare an investigation report for the Town who will then submit the report to the CTDEEP.

GZA has provided the following Tasks which details our Scope of Work. The costs associated with this scope are identified in the Budget Estimate section.





### **Well Receptor Survey Discussion**

GZA understands that the local Health Department has reviewed their files to identify the location of potable well supply wells within 500 feet from the school's property. While a well receptor survey was requested by the DEEP in their November 15, 2019 letter, it is understood that if the Health Department research is acceptable with the CTDPH, then no additional well receptor survey will be required. GZA requests that the local Health Department also obtain well logs (for all dug wells, overburden wells, and bedrock wells) that includes information on depth of completion (if available), well yield, depth of water bearing zones, length of casing, and the location of each well.

### **Task 1 – Preparation of a Work Plan**

GZA will prepare a work plan for the Town's submission to the CTDEEP. This work plan will provide additional details on the proposed sampling program for CTDEEP review and comments. Based upon submission of other work plans to state regulators, GZA will advocate for the best qualified laboratory to conduct the PFAS analyses. This work plan will outline/review:

- The Well Receptor Survey performed by others;
- All accumulated project related information;
- Field procedure for the collection of soil samples and water supply samples;
- Laboratory quality control measures for both the soil and water supply samples;

### **Task 2 – Residential Well Water Supply Sampling**

GZA will work with the Town of Canton on communicating with those local residences to obtain access to collect a potable water supply sample. GZA has not included the development of an access agreement with the residences; however, the Town may consider contacting your legal counsel to determine if an access agreement should be developed on behalf of the Town and GZA to enter and collect these water samples. GZA will only collect samples where the property owner has granted permission to collect the sample.

Because many of our everyday consumer products contain PFAS compounds, GZA will provide a high level of quality control when collecting residential samples. This will include a two-person sampling team, whereas only one of our sampler will be in contact with the actual sampling bottle, in which the sample is collected. This person will be referred to as the "clean-hands" person. The second person will be responsible for other activities and will be referred to as the "dirty-hands" person.

As part of the quality control, GZA will request that our laboratory provided PFAS free sampling containers and that PFAS free water will be provided, at their expense. In addition, GZA will request that the laboratory provide a trip blank that will accompany the unfilled sample containers from the laboratory and this trip blank will then accompany the actual samples back to the laboratory. This trip blank will evaluate any laboratory potential contamination that might be associated as part of the analytical analysis. GZA will also collect one field blank per day to ensure that no cross contamination took place during the sampling day.

GZA has estimated up to 7 residential potable water supply samples will be collected plus up to 5-quality control samples. GZA has assumed 2-field days to accommodate resident schedules.



### **Task 3 – Soil Subsurface Investigations**

GZA has reviewed the locations where the fire fighting foams were used. Based upon our review, the eastern impact area is approximately 100 feet (east/west) by 200 feet (north/south) and the southern impact areas is approximately 125 feet (east/west) by 100 feet (north/south). GZA understand that the southern field may not have been used for training but will be included in this scope of work in accordance with the DEEP letter.

Because it is unknown exactly where the AFFF was released, GZA proposes a phased approach to the subsurface investigation, to reduce the costs. The initial phase will include collecting the 0- to 3-inch sample as required in the November 15<sup>th</sup> letter and a deeper sample at approximately 3- to 4- feet below grade. A subsequent phase may be required to collect deeper soil samples and perhaps groundwater samples (deeper samples will require the use of a drill rig which may range from \$6,000 to \$10,000 to collect at the deeper intervals). GZA proposes to only use hand tools to collect these shallow samples rather than mobilizing a costly drill rig, during this phase.

Should deeper samples be required, a second phase cost estimate will be prepared which will require a driller rig to collect the deeper samples. The first phase will define where PFAS compounds are present in the subsurface and will help limit the scope of any subsequent phase, targeting only those areas with PFAS has been detected, should it be required.

#### **The number of samples per area are as follows:**

GZA's assumption is that it is likely that the fire department staged their truck on the asphalt and direct the foam into the grassy areas. As such, there would be a greater potential for soil impact away from the parking lot where the foams could have had dispersed over a wider area. GZA proposes to collect soil samples as shown on Figure 1.

In the Eastern Area (primary area of AFFF release), GZA proposes to advance 7-borings within the suspected 100- by 200-foot release area. Three borings will be advanced, spaced approximately 50-feet apart, closest to the pavement and 4-borings, spaced approximately 50-feet apart, further to the east, to assess foam dispersion. In the Southern Area, GZA proposes to advance 5-borings, located approximately 50-feet apart on a triangular grid.

GZA proposes the following sampling procedures:

- GZA proposes to use only field hand equipment as part of this phase that are PFAS free (stainless-steel augers/spatulas or stainless-steel core). Prior to the collecting of any samples, all equipment will be decontaminated. In addition, GZA will collect one equipment blank (mid-day) of the sampling equipment for laboratory analyses. Should the soil sampling analysis result in elevated concentration of PFAS compounds we can review the quality control equipment blank to see if any PFAS was detected that could contribute to the concentrations detected.
- The samples at each boring will be collected as follows:
  - GZA will collect one soil sample from the 0 to 3-inch interval as identified in the November 15<sup>th</sup> letter. This sample will be collected using a new stainless spatula directly from this soil interval, directly into the PFAS free laboratory container.





- Knowing that the soil between 0 to 3-feet below grade may be contaminated, GZA proposes to advance a hand auger to 3-feet and then push a clean PFAS free sampler from 3 to 5 feet below grade to collect a discrete second sample. This will avoid any potential carry down of contaminated soil into the sampler permitting a discrete sample being collected at this depth.
- GZA will record a soil log of the subsurface conditions observed. Should a fine grained confining unit (silt and/or clay) be identified within the soil profile, prior to the collection of the second sample, GZA field staff will communicate with the Principal-in-Charge to determine if the sample should be collected at the predetermined location or just above the confining unit. Confining units are known to limit vertical migration of contaminants. Knowing that there are floodplain soils adjacent to Cherry Brook there is a likelihood of having fine grain silts/clays present. Any confining unit will be noted on the boring log.
- Once all samples are collected, they will be transmitted to a laboratory certified in the analysis of PFAS samples. Each sample cooler will also contain a trip blank for PFAS analyses for quality control.

GZA has estimated up to 24 soil samples from 12 locations with 2-discrete depth intervals per location plus up to 5-quality control samples. GZA has assumed a maximum of 2-field days to collect these soil samples.

#### **Task 4 – Reporting**

GZA will provide a summary report that will include:

- The results of the well receptor study;
- The results of the water supply sampling;
- The results of the soil sampling;
- A comparison of the soil and water supply result to the CTDEEP Additional Polluting Substances (APSs) criteria;
- Recommendation of any future actions.
  - Note that if PFAS is detected in a water supply, the Town may be required to submit a Significant Environmental Hazard notification to the CTDEEP.

#### **Task 5 - Meetings**

GZA has allocated time for 2 meeting with the Town. Given the sensitivity of the issues surrounding PFAS, GZA anticipates that the Town will want to have an informal meeting with those residences (perhaps others) where potable water supply samples will be collected within 500- feet of the School's property. The second meeting would be to review the finding of the report. GZA estimated 4-hours per meeting.

#### **Analytical Analysis of Water Supply and Soil**

Because PFAS sampling is unlike other compounds there is currently a high demand for analyses and the cost of sampling analyses are high. In addition, because of the potential for a false positive, extra quality control is required; especially for potable water supply samples. As discussed above, GZA will advocate using a PFAS certified laboratory which we have submitted 1,000's of water and soil samples. This laboratory has provided repeatable data and the data has gone through EPA validation process. While this laboratory may not be certified



in Connecticut it has been certified to perform the EPA Method 537.1 revision 1.1, by DoD and NELAP. The rationale for using this laboratory is that we can get preferred pricing, preferred turn-around time (typically 2-weeks) and that data has gone through an EPA validation protocol. The local State certified laboratories are also certified to perform the EPA Method 537.1 revision 1.1, by DoD and NELAP; however, they currently have a backlog with turn-around time ranging at a minimum of 4 weeks. Either laboratory will provide PFAS analysis for 18-compounds as defined in Method 537.1.

Knowing that the residences may not want to wait 4 to 6 weeks for the results, the State certified laboratory would charge a premium (typically 50% more) to deliver the analytical data report in 5 to 10 days. Considering the cost per sample (in the range of \$210 to \$275 per sample), GZA will discuss with CTDEEP the need of having the laboratory being state certified. Our pricing reflects the cost of both labs.

All water supply samples will be analyzed using EPA Method 537.1 for drinking water. However, EPA does not have a PFAS Method for soil analyses. Each laboratory has developed a proprietary 537.1 Method using isotope dilution. These methods will be acceptable to the CTDEEP.

The number of samples and quality control samples, are as follows:

Sample Type	Sample Number	Quality Control Samples			
		Field Blank	Trip Blank	Equipment Blank	MS/MSD
Water Supply	7	2	2	0	1
Soil	24	0	2	2	1
<b>Totals</b>	<b>31</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>2</b>

**Additional Services (Design & Installation of Point of Entry Systems)**

GZA has designed and installed 100's off Point of Entry Treatment Systems (POETS) to treat many types of contaminants (including PFAS) from private potable water supplies wells. The POETS will be designed to remove PFAS compounds through adsorption to granulated activated carbon (GAC). POETS using a GAC household filters have a proven track record for treating PFAS, at multiple sites across the U.S. In addition, larger GAC systems are being used to treat municipal water supplies.

The POETS would be connected to the existing water supply and distribution system within the house. At larger residences, schools or commercial properties where there is higher water usage, GZA may modify the installation to address these additional requirements. The POETS are typically installed where the existing water utilities are located, if space is available. The POETS systems are designed to provide treated water to all fixtures such as sinks, showers/baths, and toilet and outside spigots. The final sizing of the GAC will be dependent on the concentrations of PFAS, flow rates and other water quality parameters that may be present from the water supply.

GZA will work with the Town of Canton, the local Health Department and the Department of Public Health (DPH) to design POETS (if required) at those location where the sum of five PFAS compounds (PFOA, PFOS, PFNA, PFHpA, PFHxS) have a concentration greater than 70 parts per trillion (ppt). The design will be completed by a Connecticut Professional Engineer and will be submitted to the CTDPH, for approval prior to installation. Once approved, GZA will coordinate with all stakeholders on the installation.





In general, the components of the POETS, may include:

- Pre-filter: Removes sand and sediment from the well water.
- Lead GAC: Removes PFAS and other constituents that sorb to GAC. The GAC vessels will be filled with Calgon F600 AW GAC. A typical POET system utilizes a 2 cubic-foot GAC vessel; however, in locations with the highest concentrations or high flows, multiple 2 cubic-foot vessels may be required.
- Lag GAC: Redundant vessel in case breakthrough occurs on the lead GAC.
- Post-filter: Removes sand and sediment from treated water.
- Flow meter: Monitors the volume of water treated/used; and
- UV Lamp: Removes bacteria that may be in the well water or present within the GAC vessels.

Once the system is installed routine maintenance will be required. The frequency will be discussed in the deliverable to CTDEP.

GZA has not included a cost for POETS; however, they could range for \$3,000 to \$8,000 per installation. There are several variabilities that influence these costs such as: flow rates, PFAS concentrations, pH, hardness, iron, and other water quality parameters/contaminants.

#### **RESPONSIBILITIES OF CLIENT**

GZA understands that the Town of Canton will initiate these investigation based upon the November 15<sup>th</sup> letter from CTDEEP. GZA will be looking to the Town to provide:

- The Town has provided a utility map of the two impacted areas. However, after reviewing the utility map provided and an aerial photograph, the map does not look like an as-built. GZA would request that the Town provide either an as built map or hire GZA to conduct a ground penetrating radar (GPR) survey at an additional expense (estimated at \$1,000 to \$1,400 per half day) to identify utility locations. The utility issue would have to be resolved before collecting the deeper soil samples.
- The Town will need to coordinate with the local residences for GZA to access their homes. The samples will have to be collected from the interior of each property.
- The Town would be responsible for the disposal of any investigation derived wastes. At this time, GZA would propose to place back and removed soil from the borehole, unless the CTDEEP will not permit such .

#### **SCHEDULE**

GZA is prepared to commence work upon authorization. GZA understands the sensitivity of the collection of soil and potable water supply samples and will work closely with the Town and CTDEEP to complete this work, as quickly as possible.

A tentative schedule is as follows:

- Work Plan
  - 1 to 2 weeks from authorization;
- Sampling of Potable Water Supplies
  - Upon authorization and approval of the Work Plan;
  - Analytical results (either 2 or 4 weeks after sampling, dependent on laboratory)



- Soil Sampling
  - One week after approval of the work plan by the CTDEEP;
  - Analytical results (either 2 or 4 week after sampling, dependent on laboratory)
- Reporting
  - 2-weeks after receipt of the analytical reports;
- Meetings
  - As required

**COST AND BASIS OF BILLING**

GZA has estimated the cost of the Scope-of-Work at **\$31,250**, on a time and material basis in accordance with the attached fee schedule (this price included \$10,500 of analytical costs). The estimated cost is based upon GZA using a preferred qualified laboratory, providing a 2-week turn-around from receipt of the samples for both the potable water supply and soil samples. GZA believes that this quick turn-around period will be preferable given the sensitivity of sampling residential wells. These fees are consistent with our DAS contract. Direct and out-of-pocket expenses and subcontractor expenses will be subject to a 15% mark-up and assumes as a municipality all services will be tax exempt.

Should the CTDEEP require all samples to be delivered to a state approved laboratory, then the cost would be \$34,750 (\$14,000 of analytical costs which does not include a 2-week turn-around). Should the Town want to pay a 50% premium increase for a 2-week turn-around, for only the potable water supply wells, the increase of the analytical cost will be approximately an additional \$2,000 or a total project cost of \$36,750. Thus, using a state approved laboratory will result in a \$5,500 cost premium to obtain a 2-week turn-around time on the potable water supply samples and there will still be a 4-week turnaround time for the soil samples.

GZA costs are broken out as follows:

Tasks	Costs
Task 1 – Work Plan	\$2,500
Task 2 – Potable Water Supply Sampling (including analytical)	\$7,500
Task 3 – Soil Investigations (includes analytical)	\$13,750
Task 4 – Reporting	\$5,000
Task 5 - Meetings	\$2,500
<b>Total</b>	<b>\$31,250</b>

GZA’s cost estimate is based on the anticipated scope of services outlined above, which represent our present judgment as to the level of service that will be needed. The Town of Canton will be notified of any conditions requiring a change in the level of effort or the scope of work and any resultant change in budget if such becomes evident.

Progress invoices will be issued approximately every four weeks. Payment is due within 30 days of receipt. Interest charges may be applied on past due balances.





Invoices are the responsibility of Client. Invoices will be sent to the Town of Canton care of Mr. Robert H. Skinner at the above address. Should the billing information change, please provide that information on the last page of this agreement.

### PROJECT COMMUNICATION PLAN

GZA is committed to providing its clients consistent input on project performance, budget and schedule, but recognizes each client wants this information delivered in a way that best meets his or her needs. Typically, we rely on regular scheduled phone calls, emails or letter reports which can be weekly, bi-weekly or monthly. To establish the Communication Plan that works best for you, GZA's Principal-in-Charge (Mr. Richard J. Desrosiers, LEP, PG) will contact you directly upon our receipt of the signed contract or other authorization to proceed.

### CONDITIONS OF ENGAGEMENT AND ACCEPTANCE

Conditions of engagement are described in the attached Terms and Conditions (08/08-Edition 05-9010) and Schedule of Fees. This Proposal for Services and the Terms and Conditions shall constitute the entire agreement between GZA and the Town of Canton. This proposal may be accepted by signing in the appropriate spaces below and returning one copy along with the retainer to GZA. Issuance of a purchase order implicitly acknowledges acceptance of our Terms and Conditions.

Thank you for the opportunity to provide these services to the Town of Canton. If you have any questions, please call Richard Desrosiers at 1-860-858-3130.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads "Richard J. Desrosiers".

Richard J. Desrosiers, LEP, PG  
Associate Principal, Hydrogeologist

A handwritten signature in black ink that reads "Stephen L. Lecco".

Stephen L. Lecco, A.I.C.P., C.E.P.  
Senior Environmental Planner

A handwritten signature in black ink that reads "James M. Emery".

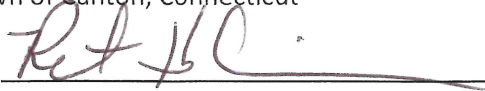
James M. Emery, P.E.  
Principal

Attachments: Terms and Conditions (08/08-Edition 509010)  
Schedule of Fees – DAS  
Toxicology White Paper  
Figure 1



This Proposal and the Terms and Conditions (08/08-Edition 05-9010) is hereby accepted and executed by a duly authorized signatory, who by execution hereof, warrants that he/she has full authority to act for, in the name, and on behalf of Client.

Town of Canton, Connecticut

By:  Its: Chief Administrative Officer

Printed Name: Robert H. Skinner Date: 11-26-2019

Billing Address (if different from above): \_\_\_\_\_

\_\_\_\_\_





## TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

### Including Site Investigation, Remediation, Geotechnical, Construction, And Testing

© 2019 by GZA GeoEnvironmental, Inc.

Client ("You"): Town of Canton

Proposal No: 05.P000411.20

Site: 4 Barbourtown Road – Canton, Connecticut

These Terms and Conditions, together with GZA's Proposal, make up the Agreement between GZA and you, Client, named above.

**BEFORE SIGNING THE PROPOSAL, BE SURE YOU READ AND UNDERSTAND THE PARAGRAPHS ENTITLED "INDEMNIFICATION" AND "LIMITATION OF REMEDIES" WHICH DEAL WITH THE ALLOCATION OF RISK BETWEEN YOU AND GZA.**

**1. Services.** GZA will perform the services set forth in its Proposal and any amendments or change orders authorized by you. Any request or direction from you that would require extra work or additional time for performance or would result in an increase in GZA's costs will be the subject of a negotiated amendment or change order.

**2. Standard of Care; Warranties.**

- a. GZA will perform the services with the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services at the same time under similar conditions in the same or similar locality.
- b. GZA warrants that its construction services will be of good quality, free of faults and defects and in conformance with the Proposal.
- c. **EXCEPT AS SET FORTH IN SUBSECTIONS 2a AND 2b, ABOVE, NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MARKETABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE OR INTENDED BY GZA'S PROPOSAL OR BY ANY OF GZA'S ORAL OR WRITTEN REPORTS.**
- d. GZA assigns to you any manufacturers' warranties of equipment or materials purchased from others, to the extent they are assignable, and your sole recourse will be against the manufacturer. Full risk of loss of materials and equipment will pass to you upon delivery to the Site, and you will be responsible for insuring and otherwise protecting them against theft and damage.

**3. Payment.**

- a. Except as otherwise stated in the Proposal, you will compensate GZA for the services at the rates set forth in the applicable Proposal, amendment or change order; reimburse its expenses, which will include a communication fee calculated as a percentage of labor invoiced; and pay any sales or similar taxes thereon.
- b. Any retainer specified in GZA's Proposal shall be due prior to the start of services and will be applied to the final invoice for services.
- c. GZA will submit invoices periodically, and payment will be due within 20 days from invoice date. Overdue payments will bear interest at 1½ percent per month or, if lower, the maximum lawful rate. GZA may terminate its services upon 10 days' written notice anytime your payment is overdue on this or any other project and you will pay for all services through termination, plus termination costs. You will reimburse GZA's costs of collecting overdue invoices, including reasonable attorneys' fees.

**4. Your Responsibilities.**

- a. Except as otherwise agreed, you will secure the approvals, permits, licenses and consents necessary for performance of the services. If you are the owner or operator of the Site, you will provide GZA with all documents, plans, information concerning underground structures (including but not limited to utilities, conduits, pipes, and tanks), information related to hazardous materials or other environmental or geotechnical conditions at the Site and other information that may be pertinent to the services or, if you are not the owner or operator of the Site, you agree to make reasonable efforts to obtain these same documents and provide them to GZA. Unless otherwise indicated in writing, GZA will be entitled to rely on documents and information you provide.
- b. If you use the services of a construction manager at the Site, you agree to use best and reasonable efforts to include in your agreement(s) with the construction contractor provisions obligating the latter:
  - (i) to indemnify and hold harmless, to the fullest extent permitted by law, you and GZA, its officers, employees and principals, for or on account of any claims, liabilities, costs and expenses, including attorneys' fees, arising out of or relating to the design or implementation of construction means, methods, procedures, techniques, and sequences of construction, including safety precautions or programs, of the contractor, or any of its subcontractors or any engineer engaged by it;
  - (ii) to name you and GZA as additional insureds under general liability and builder's risk insurance coverages maintained by the contractor, or any of its subcontractors; and



- (iii) to require that all of its subcontractors agree and be bound to the obligations set forth in (i) and (ii) above.
- c. In the event that you are unable to secure such provisions in the agreement(s) with the construction contractor, you shall promptly notify GZA and GZA shall have the opportunity to negotiate with you reasonable substitute risk allocation and insurance indemnities and protections.
- 5. Right of Entry; Site Restoration.** You grant GZA and its subcontractor(s) permission to enter the Site to perform the services. If you do not own the Site, you represent and warrant that the owner has granted permission for GZA to enter the Site and perform the services; you will provide reasonable verification on request; and you will indemnify GZA for any claims by the Site owner related to alleged trespass by GZA or its subcontractors. GZA will exercise reasonable care to limit damage to landscaping, paving, systems and structures at the Site that may occur and you agree to compensate GZA for any restoration it is asked to perform, unless otherwise indicated in the Proposal.
- 6. Underground Facilities.** GZA's only responsibility under this Section will be to provide proper notification to the applicable state utility "Call-Before-You-Dig" program. You further agree to assume responsibility for and to defend, indemnify and hold harmless GZA with respect to personal injury and property damages due to GZA's interference with subterranean structures including but not limited to utilities, conduits, pipes, and tanks:
- (i) that are not correctly shown on any plans and information you or governmental authorities provide to GZA; or
- (ii) that are not correctly marked by the appropriate utility.
- 7. Reliance.** The services, information, and other data furnished by you shall be at your expense, and GZA may rely upon all information and data that you furnish, including the accuracy and completeness thereof. You acknowledge that the quality of the services provided by GZA is directly related to the accuracy and completeness of the information and data that you furnish to GZA. **GZA'S REPORTS ARE PREPARED FOR AND MADE AVAILABLE FOR YOUR SOLE USE. YOU ACKNOWLEDGE AND AGREE THAT USE OF OR RELIANCE UPON THE REPORT OR THE FINDINGS IN THE REPORT BY ANY OTHER PARTY, OR FOR ANY OTHER PROJECT OR PURPOSE, SHALL BE AT YOUR OR SUCH OTHER PARTY'S SOLE RISK AND WITHOUT ANY LIABILITY TO GZA.**
- 8. Lab Tests and Samples.** GZA is entitled to rely on the results of laboratory tests using generally accepted methodologies. GZA may dispose of samples in accordance with applicable laws 30 days after submitting test results to you unless you request in writing for them to be returned to you or to be held longer, in which case you will compensate GZA for storage and/or shipping beyond 30 days.
- 9. GZA Professionals.** GZA employees or consultants may act as licensed, certified or registered professionals (including but not limited to Professional Engineers, Licensed Site or Environmental Professionals, or Certified Industrial Hygienists collectively referred to in this section as "GZA Professionals") whose duties may include the rendering of independent professional opinions. You acknowledge that a federal, state or local agency or other third party may audit the services of GZA or other contractor/consultant(s), which audit may require additional services, even though GZA and such GZA Professionals have each performed such services in accordance with the standard of care set forth herein. You agree to compensate GZA for all services performed in response to such an audit, or to meet additional requirements resulting from such an audit, at the rates set forth in the applicable Proposal, amendment or change order.
- 10. Hazardous Materials; GZA "Not a Generator".** Before any hazardous or contaminated materials are removed from the Site, you will sign manifests naming you as the generator of the waste (or, if you are not the generator, you will arrange for the generator to sign). You will select the treatment or disposal facility to which any waste is taken. GZA will not be the generator or owner of, nor will it possess, take title to, or assume legal liability for any hazardous or contaminated materials at or removed from the Site. GZA will not have responsibility for or control of the Site or of operations or activities at the Site other than its own. GZA will not undertake, arrange for or control the handling, treatment, storage, removal, shipment, transportation or disposal of any hazardous or contaminated materials at or removed from the Site, other than any laboratory samples it collects or tests. You agree to defend, indemnify and hold GZA harmless for any costs or liability incurred by GZA in defense of or in payment for any legal actions in which it is alleged that GZA is the owner, generator, treater, storer or disposer of hazardous waste.
- 11. Limits on GZA's Responsibility.** GZA will not be responsible for the acts or omissions of contractors or others at the Site, except for its own subcontractors and employees. GZA will not supervise, direct or assume control over or the authority to stop any contractor's work, nor shall ~~GZA's professional activities nor the presence of GZA or its employees and subcontractors be construed to imply that GZA has authority over or~~ responsibility for the means, methods, techniques, sequences or procedures of construction, for work site health or safety precautions or programs, or for any failure of contractors to comply with contracts, plans, specifications or laws. Any opinions by GZA of probable costs of labor, materials, equipment or services to be furnished by others are strictly estimates and are not a guarantee that actual costs will be consistent with the estimates.
- 12. Changed Conditions.**
- a. You recognize the uncertainties related to environmental and geotechnical services, which often require a phased or exploratory approach, with the need for additional services becoming apparent during the initial services. You also recognize that actual conditions encountered





may vary significantly from those anticipated, that laws and regulations are subject to change, and that the requirements of regulatory authorities are often unpredictable.

- b. If changed or unanticipated conditions or delays make additional services necessary or result in additional costs or time for performance, GZA will notify you and the parties will negotiate appropriate changes to the scope of services, compensation and schedule.
- c. If no agreement can be reached, GZA will be entitled to terminate its services and to be equitably compensated for the services already performed. GZA will not be responsible for delays or failures to perform due to weather, labor disputes, intervention by or inability to get approvals from public authorities, acts or omissions on your part, or any other causes beyond GZA's reasonable control, and you will compensate GZA for any resulting increase in its costs.

**13. Documents and Information.** All documents, data, calculations and work papers prepared or furnished by GZA are instruments of service and will remain GZA's property. Designs, reports, data and other work product delivered to you are for your use only, for the limited purposes disclosed to GZA. Any delayed use, use at another site, use on another project, or use by a third party will be at the user's sole risk, and without any liability to GZA. Any technology, methodology or technical information learned or developed by GZA will remain its property. Provided GZA is not in default under this Agreement, GZA's designs will not be used to complete this project by others, except by written agreement relating to use, liability and compensation.

**14. Electronic Media.** In accepting and utilizing any drawings, reports and data on any form of electronic media generated by GZA, you covenant and agree that all such electronic files are instruments of service of GZA, who shall be deemed the author and shall retain all common law, statutory law and other rights, including copyrights. In the event of a conflict between the signed documents prepared by GZA and electronic files, the signed documents shall govern. You agree not to reuse these electronic files, in whole or in part, for any purpose or project other than the project that is the subject of this Agreement. Any transfer of these electronic files to others or reuse or modifications to such files by you without the prior written consent of GZA will be at the user's sole risk and without any liability to GZA.

**15. Confidentiality; Subpoenas.** Information about this Agreement and GZA's services and information you provide to GZA regarding your business and the Site, other than information available to the public and information acquired from third parties, will be maintained in confidence and will not be disclosed to others without your consent, except as GZA reasonably believes is necessary: (a) to perform its services; (b) to comply with professional standards to protect public health, safety and the environment; and (c) to comply with laws and court orders. GZA will make reasonable efforts to give you prior notice of any disclosure under (b) or (c) above. Information available to the public and information acquired from third parties will not be considered confidential. You will reimburse GZA for responding to any subpoena or governmental inquiry or audit related to the services, at the rates set forth in the applicable Proposal, amendment or change order.

**16. Insurance.** During performance of the services, GZA will maintain workers compensation, commercial general liability, automobile liability, and professional liability/contractor's pollution liability insurance. GZA will furnish you certificates of such insurance on request.

**17. Indemnification.** You agree to hold harmless, indemnify, and defend GZA and its affiliates and subcontractors and their employees, officers, directors and agents (collectively referred to in this paragraph as "GZA") against all claims, suits, fines and penalties, including mandated cleanup costs and attorneys' fees and other costs of settlement and defense, which claims, suits, fines, penalties or costs arise out of or are related to this Agreement or the services, except to the extent they are caused by GZA's negligence or willful misconduct.

**18. Limitation of Remedies.**

- a. To the fullest extent permitted by law and notwithstanding anything else in this Agreement to the contrary, the aggregate liability of GZA and its affiliates and subcontractors and their employees, officers, directors and agents (collectively referred to in this paragraph as "GZA") for all claims arising out of this Agreement or the services is limited to \$50,000 or, if greater, 10% of the compensation received by GZA under this Agreement.
- b. You may elect to increase the limit of liability by paying an additional fee, such fee to be negotiated prior to the execution of this Agreement.
- c. Any claim will be deemed waived unless received by GZA within one year of substantial completion of the services.
- d. GZA will not be liable for lost profits, loss of use of property, delays, or other special, indirect, incidental, consequential, punitive, exemplary, or multiple damages.
- e. GZA will not be liable to you or the Site owner for injuries or deaths suffered by GZA's or its subcontractors' employees.
- f. You will look solely to GZA for your remedy for any claim arising out of or relating to this Agreement, including any claim arising out of or relating to alleged negligence or errors or omissions of any GZA principal, officer, employee or agent.

**19. Disputes.**

- a. All disputes between you and GZA shall be subject to non-binding mediation.



- b. Either party may demand mediation by serving a written notice stating the essential nature of the dispute, the amount of time or money claimed, and requiring that the matter be mediated within forty-five (45) days of service of notice.
- c. The mediation shall be administered by the American Arbitration Association in accordance with its most recent Construction Mediation Rules, or by such other person or organization as the parties may agree upon.
- d. No action or suit may be commenced unless mediation has occurred but did not resolve the dispute, or unless a statute of limitation period would expire if suit were not filed prior to such forty-five (45) days after service of notice.

**20. Miscellaneous.**

- a. Massachusetts law shall govern this Agreement.
- b. The above terms and conditions regarding Limitation of Remedies and Indemnification shall survive the completion of the services under this Agreement and the termination of the contract for any cause.
- c. Any amendment to these Terms and Conditions must be in writing and signed by both parties.
- d. Having received these Terms and Conditions, your oral authorization to commence services, your actions, or your use of the Report or Work Product constitutes your acceptance of them.
- e. This Agreement supersedes any contract terms, purchase orders or other documents issued by you.
- f. Neither party may assign or transfer this Agreement or any rights or duties hereunder without the written consent of the other party.
- g. Your failure or the failure of your successors or assigns to receive payment or reimbursement from any other party for any reason whatsoever shall not absolve you, your successors or assigns of any obligation to pay any sum to GZA under this agreement.
- h. These Terms and Conditions shall govern over any inconsistent terms in GZA's Proposal.
- i. The provisions of this Agreement are severable; if any provision is unenforceable it shall be appropriately limited and given effect to the extent it is enforceable.
- j. The covenants and agreements contained in this Agreement shall apply to, inure to the benefit of and be binding upon the parties hereto and upon their respective successors and assigns.



**MASTER SERVICES AGREEMENT**  
**DAS CONTRACT RATES**  
**2019-2024**

Principal Level (All) / Senior Consultant .....	\$210.00 per hour*
Senior Project Manager.....	\$175.00 per hour
Sr. Technical Specialist .....	\$170.00 per hour
Project Manager .....	\$140.00 per hour
Assistant Project Manager .....	\$115.00 per hour
Engineer/Scientist I .....	\$100.00 per hour
Engineer/Scientist II .....	\$85.00 per hour
CADD Operator .....	\$100.00 per hour
Technician .....	\$85.00 per hour
Word Processor .....	\$80.00 per hour
Clerical .....	\$80.00 per hour

The above rates for personnel will be charged for actual time worked on the project. In addition, there will be charges for:

- Time required for travel from Company office to job or meeting site and return.
- For work requiring out-of-town overnight stay, the minimum charge for work on the project will be eight (8) hours per day.
- Technical and field equipment rental charges based on standard unit prices.
- Outside services and Out-of-Pocket Expenses - at cost plus 5%.