RUSH!!

Contract #20180195

City of Springfield Contract Tracer Log

INSTRUCTIONS: Upon receipt, please initial and write in the date of receipt on this Tracer form. When your department has approved and signed the blanket contract, please initial and date in the forwarding section and deliver to the next department.

DEPARTMENT	DATE RECEIVED		DATE FORWARDED TO NEXT DEPT.	
	Initials	Date	Initials	Date
Office of Procurement	TGT	12/13/17	TGT	12/14/17
Capital Assets			BSG	12/19/17
City Comptroller	LK	12/20/17	LK	12/20/17
Law	PF	12.22.17	PF	12.22.17
CAFO	TMM	12.22.17		
Mayor	CJ	12/22/17	CJ	12/26/17
Office of Procurement			GSA	12/27/17

Vendor No.: **6824** Contract Date: **9/30/17** Contract Amount: **$750,000.00/YR**

Org/Object Code 1:
Org/Object Code 2:
Org/Object Code 3:
Org/Object Code 4:

Bid #: **18-010**

Contract Expiration Date: **9/29/2018**

Vendor Name: **GZA, Inc.**

Contract Purpose: **On-Call Engineering Services**

Requesting Department: **DCAC**

Renewal Date: **9/30/2018**

TYPE OF DOCUMENT (Please select at least one):

☒ New ☐ Amendment ☐ Extension ☐ Renewal

BID# **18-010**
V# **6824**

CITY BLANKET CONTRACT NO. **20180195**
OOP'18

PROFESSIONAL ON-CALL ENGINEERING SERVICES- HORIZONTONAL CONSTRUCTION

This AGREEMENT ("Agreement") is entered into and effective as of September 30, 2017, and is made by and between the **CITY OF SPRINGFIELD,** a Massachusetts municipal corporation with a principal office at 36 Court Street, Springfield, Massachusetts 01103, acting by and through its Department of Capital Asset Construction (DCAC), with the approval of its Mayor, (hereinafter called the "**OWNER" or "City**"), and **GZA GeoEnvironmental, Inc.** , an Engineering firm with its principal offices located at 1350 Main Street, Suite 1400, Springfield, MA 01103, (hereinafter called the "**Engineer**").

WITNESSETH:

WHEREAS, the owner desires to retain a multidiscipline Engineering firm to provide Professional Engineering Services for a project generally described as Special Projects/Basic Ordering Agreement;

WHEREAS, the Engineer has been selected as one of the top ranked proposers from the City's Request for Proposals Qualifications performed similar in nature to, but not pursuant to M.G.L. Ch. 30B, as this project is for public works construction and is exempt from the Massachusetts Designer Selection Law as well as the Uniform Procurement Act, (An excerpt of the City of Springfield RFP No. 18-010 is attached to this Agreement as **Exhibit A**, and is incorporated by reference herein; and

WHEREAS, the ENGINEER represents, with full knowledge that the City is relying on such representation, that it has the necessary skills, qualifications, expertise, experience, and equipment to perform the work and services; and

WHEREAS, the OWNER desires to retain the ENGINEER on the terms and conditions set forth in this Agreement and in the ENGINEER's RFP proposal, attached as **Exhibit B** to this Agreement and incorporated by reference, has agreed to accept such retainer;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter contained, the parties hereto do hereby agree as follows:

ARTICLE 1: TERM

A. Year 1: The first year ("Year 1") of this Agreement shall commence on September 30, 2017 and will terminate on September 29, 2018, unless earlier terminated in accordance with this Agreement.

B. Options to Extend: The OWNER in its sole discretion shall have the option to extend this Agreement for two (2) additional 12-month terms.

ARTICLE 2: SCOPE OF SERVICES

A. Services are to be provided only at the request of the Owner acting through its Department of Public Works and various other departments. Services will be requested on an as needed basis, and the Owner is not required to request any services. The Owner retains the right to procure engineering services otherwise than by this Agreement.

B. The ENGINEER agrees to furnish the OWNER the following general engineering services on an "as needed" basis:

1. Consultation and advice;
2. Feasibility Studies;
3. Field Investigation and Engineering Data Collection;
4. Engineering Reports;
5. Land Surveying;
6. Construction Cost Estimating;
7. Design Services, whole or in part;
8. Construction Management and Inspection;
9. Materials Testing;
10. Value Engineering;
11. Expert Testimony;
12. Environmental Assessments;
13. Landfill Services;
14. Preparation of O&M Manuals;
15. State of Federal Agency Mandate Compliance.

C. Tasks

The ENGINEER's Services on a particular project may include the following tasks, which will be detailed in the specific Project Order:

1. Studies, Field Investigations and Reports

   a. All studies and field investigations to be made by ENGINEER will include an evaluation and report on the condition of the existing facilities with recommendations for renovation, repair, treatment, or replacement in accordance with the project and objectives.

   b. Field investigation must be completed as soon thereafter as weather permits.

   c. The ENGINEER will provide all of the staff necessary to conduct the study.

2. Preparation of Plans and Specifications

   a. ENGINEER will prepare plans and specifications, a complete project budget and schedule, and bid documents, including all contracts and other documents required by the

Owner and the City's Purchasing Department. ENGINEER will review and advise Owner regarding the evaluation of bidders and bids.

b. The ENGINEER shall attend any and all meetings mutually agreed upon within each project scope.

c. Assist in processing construction bids in order to be received at a date to be mutually agreed upon.

d. The ENGINEER will meet all other requirements as specified in the Contract Documents.

3. Contract Administration (Contractor)

a. ENGINEER will provide Construction Administration Services during period of repairs and modifications to facilities. The number of visits shall be specified in the Project Order for each project and will be based on the duration of the construction schedule.

b. The ENGINEER shall visit the site(s) at Intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the work completed and to determine, In general, if the work is being performed in accordance with the Contract Documents. The ENGINEER shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work. On the basis of on-site observations, the ENGINEER shall keep the Owner informed of the progress and quality of the Work, and shall endeavor to guard the Owner against defects and deficiencies in the Work.

c. The ENGINEER shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the work, since these are solely the Contractor's responsibility under the Contract for Construction. The ENGINEER shall keep the Owner informed of the Contractor's compliance with the schedule and of any failure of the Contractor to carry out the Work in accordance with the Contract Documents.

d. The ENGINEER shall at all times have access to the work wherever it is in preparation or progress.

e. Based on the ENGINEER's observations and evaluations of the Contractor's Applications for Payment, the ENGINEER shall review and certify the amounts due the Contractor.

f. The ENGINEER certification for payment shall constitute a representation to the Owner, based on the ENGINEER's observations at the site(s) and on the data comprising the Contractor's Application for Payment, that the work, to the best of the ENGINEER's knowledge, information and belief, has progressed to the point indicated and that the quality of the work is in accordance with the Contract Documents. The issuance of a Certificate for Payment shall not be a representation that the ENGINEER has:

i. Made exhaustive or continuous on-site inspections to check the quality or quantity of the work;
ii. Reviewed construction means, methods, techniques, sequences or procedures;
iii. Ascertained how or for what purpose the Contractor has used the money previously paid on account of the Contract sum.

g. The ENGINEER shall have authority to reject Contractor work which does not conform to the Contract Documents and will have authority to require additional inspection or testing of the work whenever, in the ENGINEER's reasonable opinion, it is necessary or advisable for the implementation of the intent of the Contract Documents.

h. The ENGINEER shall review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the plans, specifications, and Contract Documents. The ENGINEER's action shall be taken with such reasonable promptness as to cause no delay. When professional certification of performance characteristics of materials, systems or equipment is required by the Contract Documents, the ENGINEER shall be entitled to rely upon such certification to establish that the materials, systems or equipment will meet the performance criteria required by the Contract Documents.

i. The ENGINEER shall assist in the preparation of Change Orders and Construction Change Directives, with supporting documentation and data, if authorized or confirmed in writing by the Owner, for the Owner's approval and execution in accordance with the Contract Documents. The ENGINEER may authorize minor changes In the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time, which are not inconsistent with the intent of the Contract Documents. Such approvals must be done in writing and copies provided to the Owner.

j. The ENGINEER shall conduct inspections to determine the dates of substantial completion and final completion and shall issue a final Certificate of Payment.

k. The ENGINEER shall interpret and decide matters concerning performance of the Contractor under the requirements of the Contract Documents on written request of either the Owner or the Contractor. The ENGINEER's response to such requests shall be made with reasonable promptness and within any time limits agreed upon.

l. The ENGINEER shall prepare a monetized punch list and advise the Owner of any items of work, which are incomplete and defective. The ENGINEER shall also obtain all warranties related to the work and provide the same to the Owner.

D. The ENGINEER may be required to accomplish projects which are too large for execution by the OWNER and /or which require special expertise including but not limited to the following:

1. ENGINEERING Services;
2. Aerial Surveys;

3. Bridge Engineering;
4. Composting;
5. Construction Inspection & Administration;
6. Construction Management;
7. Electrical Engineering;
8. Environmental Permitting;
9. Environmental Sciences and engineering;
10. Geographic Information Systems;
11. Flood Control Systems;
12. Highway and Street Engineering;
13. Land Surveying;
14. Building Inspection and Assessments;
15. Mechanical Engineering;
16. Pavement Management;
17. Solid Waste Management;
18. Traffic Engineering;
19. Hazardous Material;
20. Geotechnical Engineering.

E. The ENGINEER will provide a wide range of design and specialized consulting services through the medium of an appropriately staffed division or subsidiary organizations or subcontractors. The ENGINEER shall require that the subsidiary organizations or subcontractors be directed by a professional engineer with the requisite training and experience in the specialized field. The ENGINEER always retains the primary responsibility for all aspects of the projects as assigned.

E. The ENGINEER will at all times employ, maintain, and assign to the performance of a project a sufficient number of competent and qualified professional and other personnel to meet the project requirements.

F. The ENGINEER shall maintain an effective internal control system sufficient to provide controls on Design review, quality assurance, project scheduling, personnel allocation, and financial control.

G. CHANGES

The OWNER may make or approve changes within the general scope of services in this AGREEMENT. If such changes affect the ENGINEER'S cost or the time required for performance of the services, an equitable adjustment mutually agreeable to the OWNER and ENGINEER will be made through an amendment to this AGREEMENT. The ENGINEER is required to make a timely written request for any such changes being requested by the ENGINEER.

ARTICLE 3: PROJECT ORDERS

A. FURNISH ALL SERVICES DESCRIBED HEREIN IN ACCORDANCE WITH THE

FOLLOWING OVERALL OBJECTIVES:

The Engineer shall provide services as may be required and requested by the Owner. Provision of these services is to be accomplished under a series of definitive written Project Orders from the Owner to the ENGINEER. The Project Order will identify the work to be accomplished; the limit of compensation for each Project Order; and the schedule for performing the scope of service.

B. The procedure for implementing individual Project Orders shall be as follows:

1. THE ENGINEER shall be notified by the OWNER of the specific Project(s) to be performed, hereupon the ENGINEER and the OWNER shall mutually formulate a Scope of Services for each Project Order.

2. THE ENGINEER shall prepare a written proposal stating:

i. The Scope of Services;
ii. The proposed schedule for completion;
iii. The estimated staffing, number of man-hours for each profession,
iv. Direct labor costs, other direct costs (reimbursable expenses), and any other anticipated fees or costs associated with the accomplishment of the Project Order;
v. An estimated compensation cost ceiling for the Specific Project Order; and,
vi. A list of any materials or information required from the OWNER to complete the Project Order Scope of Services

3. Following OWNER review and approval of the ENGINEER's proposal, the agreed upon terms and provisions shall be prepared in Project Order format and duly executed by both parties. Only the Director of the applicable City Department shall have the authority to execute a Project Order.

4. No work is authorized on the Project Order until the Engineer has received a Notice to Proceed from the OWNER for the specific Task. Such authorization shall be in the form of a written letter signed by the Director of the applicable City Department. Any work performed prior to receiving such Notice to Proceed shall be at the ENGINEER'S risk. No work on the final design of any project shall be performed by the ENGINEER without the prior written authorization of the OWNER. All requests for change orders to the Project Order must be made in writing and timely (within ten calendar days of the precipitating event or receipt of information) by the ENGINEER or be considered waived.

5. For the purposes of this entire contract, Owner authorization or approval shall mean written approval signed by the Director of the applicable department. No other employee of the applicable City department shall have the authority to authorize or approve any terms, conditions, or changes to project orders or this Agreement.

C. Information to be Included in the Engineers' Proposal for the Project Order

1. Cost Information: The Project Order shall include the agreed-upon Lump Sum Not to Exceed Fee along with an hourly rate fee schedule for each of the job classifications that will be assigned to the project. (Individual employee salaries are not required.)

i. The Project Order shall contain a statement that the hourly rate fee schedule shall remain valid for the duration of the particular project and the contract.

ii. The Project Order shall contain a statement that increases or decreases in the scope of the project may result in an adjustment to the approved Lump Sum Not to Exceed fee. Authorization to increase the approved Lump Sum fee will not be considered unless it can be clearly established that actual work is required beyond the currently approved scope of work. The Lump Sum Not to Exceed fee for the project may not be exceeded without prior written authorization from the OWNER, and a written amendment to this Agreement signed by all parties.

iii. The ENGINEER is required to certify in writing in the proposal that the total estimated engineering cost is based on a Lump Sum "not to exceed" basis which will include all expenses, and that amount will not be exceeded without prior written authorization from the OWNER.

iv. Increases or decreases in the scope of the project may result in an adjustment to the approved Lump Sum fee. Authorization to increase the approved Lump Sum fee will not be considered unless it can be clearly established that actual work is required beyond the currently approved scope of work.

v. The work associated with the total project shall be divided into various project tasks, along with the estimated cost for each task identified.

2. Project Schedule: The Project Order shall contain a time schedule in bar graph form from the notice to proceed to the ENGINEER, through the completion of the various tasks including but not limited to design, bidding, construction, commissioning, and warranty period.

3. Approval for Final Design: The Project Order shall contain a statement requiring that the ENGINEER obtain written approval from the OWNER prior to proceeding into the Final Design phase.

4. Organization Chart: The ENGINEER shall include a copy of the proposed Organization Chart for the Project for the OWNER'S approval. The Organization Chart shall delineate the names, titles, and job duties of all his employees as well as any sub-consultants/ subcontractors responsible for performance under the Project. Also to be included are individual resumes of such employees setting forth education and other qualifications for their denoted positions.

5. ENGINEER's Project Coordinator: The ENGINEER shall designate in writing one person for each Project who, on his behalf, shall be responsible for directing and coordinating all of the services to be rendered by the ENGINEER under the Project. Such designee shall be subject to the approval of the OWNER based on the experience and professional licensing requirements.

Moreover, OWNER reserves the right to approve all personnel assigned to the Project irrespective of such designee's scope of responsibility or project performance.

6. Approach: A description of the ENGINEER's proposed approach and methods of operation for accomplishing this work. Include a statement that all work on the project shall be performed in accordance with the provisions in this document unless otherwise noted.

7. The ENGINEER shall include a statement that all work on the project shall be performed in accordance with the provisions in this document unless otherwise noted. The ENGINEER shall comply with the OWNER'S Special Supplemental Conditions (**Exhibit D**) wherever possible.

ARTICLE 4: COMPENSATION

A. All obligations of the OWNER are subject to the prior appropriation to meet said obligations.

B. The OWNER is not obligated for any compensation or any expenses of any kind unless the OWNER has given prior approval therefore.

C. Compensation by the OWNER to the ENGINEER will be as follows:

1. Compensation by the OWNER to the ENGINEER will be on a Lump Sum Not to Exceed Amount (including all costs) Fee for each Project.

2. Compensation shall be in accordance with the ENGINEER'S Price Proposal attached hereto as **Exhibit B** and incorporated by reference.

3. For any extension terms, if the OWNER and the ENGINEER do not agree to maintain compensation as set forth in **Exhibit C**, then the Consumer Price Index (C.P.I.U.), The United States City Average-All Urban Consumers, as determined by the Bureau of Labor Statistics, shall be utilized for any price adjustment from the previous year's prices. The compensation for extension terms will not increase greater than the C.P.I.U. for the previous twelve (12) months. This index will be computed two (2) month prior to the expiration of this Agreement.

D. Contract Value

1. Total potential expense and dollar value of this Agreement is for an amount not to exceed **Seven Hundred Fifty Thousand Dollars and 00/100 ($750,000.00)** per year.

E. Project Budget

The ENGINEER will make reasonable efforts to complete the work on assigned projects within the project budget and will keep the OWNER informed of progress toward that end so that the budget or work effort can be adjusted if found necessary.

2. The ENGINEER is not obligated to incur costs beyond the indicated budgets, as may be adjusted, nor is the OWNER obligated to pay the ENGINEER beyond these limits.

3. When any budget has been increased, the ENGINEER'S excess costs expended prior to such increase will be allowable to the same extent as if such costs had been incurred after the approved increase.

F. Definitions for Billing Calculations:

1. Direct Salaries. Direct Salaries are the amount of wages or salaries paid to the ENGINEER'S employees for work directly performed on the PROJECT, exclusive of all payroll-related taxes, payments, premiums, and benefits.

2. Salary Costs. Salary Costs are the amount of wages or salaries paid ENGINEER'S employees for work directly performed on the PROJECT. Such costs are determined by the ENGINEER'S price proposal attached hereto as **Exhibit C**.

3. Direct Expenses. Direct Expenses are those costs incurred on, or directly for, the PROJECT, including but not limited to: necessary transportation costs, including mileage at ENGINEER's current rate when its automobiles are used, meals and lodging, laboratory tests and analyses, computer services, word processing services, telephone, printing, binding and reproduction charges, all costs associated with outside consultants, sub-consultants, and other outside services and facilities, and other similar costs. Reimbursement for Direct Expenses will be on the basis of actual charges, without any mark up. A **5%** fee may be added to all subcontractors costs.

ARTICLE 5: TERMS OF PAYMENT FOR PROGRESS PAYMENTS FOR PROJECT ORDERS

A. Progress Payments for Design Services. It is anticipated that progress payments for each Project Order shall be made to the ENGINEER monthly, or such longer period represented in ENGINEER'S invoice based on actual work performed or services rendered for the applicable period. The ENGINEER shall not be paid more for any Project Order at any time than would be due on a percentage of completion basis with respect to that Project Order as determined by the OWNER.

B. The OWNER need not process payment unless the ENGINEER submits invoices meeting the following conditions:

1. Proper Invoice: In addition to any other requirement set forth in this contract with respect to what constitutes a proper invoice or for the ENGINEER to be entitled to receive payment, the ENGINEER'S invoice, in duplicate, must set forth:

i. A detailed description of the services performed and expenses incurred on each task set forth in the Project Order; listed dates of service and time expended for each job classification.

ii. That portion of the contract price related to such payment less any deductions, such as retainage, required pursuant to the terms hereof.

iii. The contract number.

iv. Should the invoice not be calculated correctly, such as not taking into account retainage as a deduction, the OWNER may either reject the invoice or treat the invoice as proper only to the extent of the correct calculation of the amount thereof.

2. Supporting Documentation: In addition to any other requirement set forth in this contract with respect to what supporting documentation must accompany an invoice, the following documents must be attached to any invoice submitted by the ENGINEER:

i. Technical Salaries. For hourly projects or additional services, actual time spent and hourly rates within each job classification. (The OWNER must approve any overtime or premium time).

ii. Direct Out - of Pocket Expenses- A summary showing all charges that are actual and are in conformity with the contract and have not previously been charged. In addition, copies of paid invoices are required. Only those out-of-pocket expenses included in the applicable Project Order and the budget for the Project shall be reimbursable to the ENGINEER.

iii. Such other supporting documentation as the sub-consultants' payment forms and support, or similar, as required by Owner.

iv. For projects requiring payment upon milestones of performance, a certificate, or equivalent document, an acceptance by the owner's representative that the milestone has been achieved.

C. Payment will be determined according to the approved Lump Sum Not to Exceed Fee set forth in the Project Order, based on work performed and invoices approved by the Owner. Concise progress reports must be submitted with each payment request stating work completed and the status of the various project tasks. Payment requests shall correspond directly with the project tasks as outlined in the proposal and Project Order. The following provisions shall be applicable to these payments:

1. Progress payments will not exceed ninety-five percent (95 %) of the total Lump Sum Not to Exceed Fee.

2. The remaining five percent (5 %) of the Lump Sum Not to Exceed Fee will be paid following the City's final acceptance of all work on the particular Project Order by the ENGINEER.
3. At such time that either the payment request or the actual work completed reaches fifty percent (50%) of the Lump Sum Not to Exceed Fee for the particular Project, the ENGINEER and the OWNER shall meet to review the project status and projected completion schedule.

4. The following statement is to be included on all invoices:

"I certify that the amount of this invoice is just and correct and in accordance with the terms of

the contract, and payment thereof has not been previously received."
Signature:_____
Date:_____

ARTICLE 6: OBLIGATIONS OF THE ENGINEER

A. ENGINEER'S Representations

By entering into this Agreement with the OWNER, the ENGINEER represented and warrants the following:

1. That he is experienced in and competent to perform the type of work required.

2. That he is financially solvent, able to pay his debts as they mature, and possesses sufficient working capital to initiate and complete the work required under the Agreement.

3. That he is familiar with all Federal, State, County, Municipal and departmental laws, ordinances, permits, regulations and resolutions applicable to its work which may in any way affect the work, including but not limited to any special acts relating to the work or any part thereof.

4. That such work required by the Contract which is to be done by him will be satisfactorily performed.

5. That he will fully comply with all requirements in the Agreement.

6. That he will perform the work consistent with sound ENGINEERING practice, good workmanship, and sound business practices, and in the most expeditious and economical manner consistent with such standards and OWNER'S interests.

7. That he will furnish efficient business administration and experienced management and an adequate supply of employees at all times;

8. That he will complete the work within the Project/Task Time, milestones, and price unless adjusted by agreement of the parties hereto.

9. The ENGINEER shall comply and all design work shall conform with all applicable and current additions or revision of Massachusetts Statewide Building Codes.

10. Amendments to ARTICLE 6, if any, will be included in the Project Order.

B. Sub Surface Investigations

1. In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, explorations, and investigations have been made.

Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total PROJECT cost and/or execution.

C. ENGINEER's Personnel at Construction Site

1. The presence or duties of the ENGINEER's personnel at a construction site, whether as onsite representatives or otherwise, do not make the ENGINEER or its personnel in any way responsible for those duties that belong to the OWNER and/or the construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences and procedures necessary for coordination and completing all portions of the construction work in accordance with the Contract Documents and any health or safety precautions required by such construction work.

2. Unless specifically contracted for such services in this Contract or any applicable Project Order, the ENGINEER and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions and have no duty for inspecting, noting, observing, correcting or reporting on health or safety deficiencies of the construction contractor or other entity or any other persons at the site except ENGINEER's own personnel.

3. The ENGINEER shall provide personnel acceptable to OWNER at each construction site, at all times during which any work is being undertaken, and said personnel shall possess the specific experience and expertise in the given discipline or area of the project being performed at any given time.

D. Opinions of Cost, Financial Considerations, and Schedules

1. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the PROJECT, the ENGINEER will exercise its professional judgment based on its experience.

2. When the OWNER requires the ENGINEER to prepare quantity and material take-offs and/or opinions of cost from plans and specifications that are less than 100 percent complete, the ENGINEER will not be responsible for any and all loss, liability or claims resulting from the incompleteness.

3. Notwithstanding this provision, OWNER hereby reserves the unconditional right to withhold any payment or any portion thereof as it determines in its sole discretion, as representative of the value of any work the OWNER deems to be incomplete, in error, or otherwise not reasonably satisfactory to the OWNER or not completed in accordance with the terms of this Contract, and to retain such amounts until corrective work is completed.

E. Construction Progress Payments

1. Recommendations by the ENGINEER to the OWNER for periodic construction progress

payments to the construction contractor on a particular project will be based on the ENGINEER's knowledge, information, and belief from actual observation and inspection that the work has progressed to the point indicated. Such recommendations shall indicate that the ENGINEER has made an inspection of the work that is customary in the industry and consistent with standard industry practices and the ENGINEER has to ascertain that the construction contractor has completed the work; that the final work will be acceptable to the OWNER; that the ENGINEER has made an examination to ascertain how or for what purpose the construction contractor, sub-contractors, and suppliers have been properly paid; that title to any of the work, materials, or equipment has passed to OWNER free and clear of liens, claims, security interests, or encumbrances; or to the ENGINEER's knowledge that there are not other matters at issue between OWNER and the construction contractor that affect the amount that should be paid.

F. Record Drawings

1. Record drawings, if required, shall be prepared in accordance with standards that are customary in the industry and upon actual observation and inspection; and the ENGINEER shall indicate the standards that are customary in the industry, and are in compliance with and representative of the exact locations, type of various components, or exact manner in which the PROJECT was finally constructed.

G. Access to ENGINEERs Accounting Records

1. Right to Audit: The ENGINEER shall maintain books, records, and accounts of all costs in accordance with generally accepted accounting principles and practices, but not less than a minimum period of six (6) years from the date of completion of the work. The OWNER or its authorized representative shall have the right to audit the books, records, and accounts of the ENGINEER under any of the following conditions:

i. If the Contract is terminated for any reason in accordance with the provisions of this Agreement, in order to arrive at equitable termination costs:

a. In the event of a disagreement between the ENGINEER and the OWNER on the amount due the ENGINEER under the terms of this Contract.

b. To check or substantiate any amounts invoiced or paid which are required to reflect the costs of the ENGINEER, or the ENGINEER's efficiency or effectiveness under this Contract or in connection with extras, changes, additions, back charges, or other, as may be provided for in this Contract; and/or

c. If it becomes necessary to determine the Owner's rights and the ENGINEER's obligations under the Contract or to ascertain facts relative to any claim against the ENGINEER which may result in a charge against the OWNER.

2. These provisions for an audit shall give the OWNER unlimited access during normal working hours to the ENGINEER's books and records; under the conditions stated above.

H. ENGINEER's Insurance

1. The ENGINEER will maintain at a minimum throughout this AGREEMENT the following insurance:

a. Worker's compensation and employer's liability insurance as required by the Commonwealth of Massachusetts.

b. Comprehensive automobile and vehicle liability insurance covering claims for injuries to member of the public and/or damages to property of others arising from use of motor vehicles, including onsite and offsite operations, and owned, non-owned, or hired vehicles, with not less than $1,000,000 combined single limits.

c. Commercial general liability insurance covering claims for injuries to members of the public or damage to property of others arising out of any covered negligent act or omission of the ENGINEER or of any of its employees, agents, or subcontractors, with not less than $1,000,000 combined single limits.

d. Professional liability insurance of not less than $ 2,000,000.

e. OWNER will be named as an additional insured with respect to liabilities hereunder in insurance coverage's identified in items ". B" and "C", and ENGINEER waive subrogation against OWNER as to said policies.

2. The Contractor will be responsible for all damages, loss or injury, including death, to persons or property that may arise or be incurred in or during the conduct and progress of said work and as the result of any action, omission or operation under the Contract or in connection with the Work under the Contract, whether such action, omission or operation is attributable to the Contractor, the Subcontractor, any material supplier, anyone directly or indirectly employed by any of them, or any other person. The Contractor shall make good any damages that may occur in consequence of the Work or any part of it. The Contractor shall assume all liability, loss and responsibility of whatsoever nature by reason of his neglect or violation of any Federal, State, County, or local laws, regulations, or ordinances.

2. The Contractor shall indemnify, hold harmless, and defend the OWNER and ENGINEER, their employees, agents, servants, and representatives from and against any and all claims, suits, demands, actions, costs (including attorney's fees) and damages of whatever nature, regardless of the merit thereof, which may be asserted against the OWNER and/or ENGINEER on account of any such damages or injuries, including death, arising out of or resulting from the performance of the Contractor's Work or the failure to perform the Contractor's Work, including jurisdictional labor disputes or other labor troubles that may occur during the performance of the Contractor's Work, whether or not such damages or injuries, including death, are caused in part by the negligence of the OWNER and/or ENGINEER, their employees, agents, servants, or representatives; provided, however, that the Contractor shall not be obligated to indemnify the OWNER and/or ENGINEER hereunder for any damages or injuries, including death, caused by or resulting from the sole negligence of the OWNER and/or ENGINEER.

I. Asbestos or Hazardous Substances

1. If asbestos or unanticipated hazardous substances in any form are encountered or suspected, the ENGINEER shall immediately notify the OWNER and shall stop its own the work in the affected portions of the PROJECT to permit testing and evaluation of the problem. If asbestos is suspected, the ENGINEER shall, upon the request of OWNER, undertake all steps required in the reporting process applicable to such notices and accept total responsibility to contact all regulatory agencies and in identifying asbestos testing laboratories and demolition/removal contractors or Consultants, and all other required remedial efforts.

2. If asbestos is confirmed, the OWNER may engage a specialty Consultant or contractor to study the affected portions of the work and perform all remedial measures. If unanticipated hazardous substances other than asbestos are suspected, the ENGINEER'S Hazardous Material Consultant shall conduct tests as directed by the OWNER to determine the extent of the problem and to perform the necessary studies and recommend the necessary remedial measures at an additional fee to be negotiated.

J. Litigation Assistance

The ENGINEER's Scope of Services includes required or requested assistance to support, prepare, document, bring, defend or assist in litigation undertaken or defended by the OWNER. All such services required or requested of the ENGINEER, except for suits or claims between the parties to this AGREEMENT or suits or claims brought by third parties against ENGINEER, will be reimbursed as mutually agreed, and payment for such services shall be in accordance with this Agreement.

ARTICLE 7: OBLIGATIONS OF THE OWNER

A. Owner Furnished Data

The OWNER may provide to the ENGINEER all technical data in the OWNER'S possession, including, but not limited to, previous reports, maps, surveys, borings, and all other information relating to the ENGINEER'S services on the PROJECT.

2. The ENGINEER may, where reasonable, rely upon the accuracy, timeliness, and completeness of the information provided by the OWNER.

B. Access to Facilities and City Property

1. The OWNER will make its facilities accessible to ENGINEER as required for ENGINEER's performance of its services.

C. Advertisements, permits, and Access

1. Unless otherwise agreed to in the Scope of Services, the OWNER will obtain, arrange, and pay for all advertisements for bids and permits required by local, state, province, or federal

authorities; and land, easements, right-of-way, and access necessary for the ENGINEER's services.

D. Timely Review

1. The OWNER may examine the ENGINEER's studies, reports, sketches, drawings, specifications, proposals, and other documents; and may obtain advice of an attorney, insurance counselor, accountant, auditor, and other Consultants as OWNER deems appropriate; and render in writing decisions required of OWNER in a timely manner.

E. Prompt Notice

1. The OWNER will give prompt written notice to ENGINEER whenever OWNER observes or becomes aware of any development that affects the scope of timing of ENGINEER's services, or any defect in the work of the ENGINEER or construction contractors.

ARTICLE 8: TERMINATION

A. Termination of Contract by the OWNER for Cause:

1. If, through any cause, the ENGINEER shall fail to fulfill in a timely and proper manner his obligations under this contract, or if the ENGINEER shall violate any of the covenants, agreements, or stipulations of this contract, the OWNER shall thereupon have the right to terminate the contract, by specifying the effective date thereof in writing, at least five (5) days before the effective date of such termination. In such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, and reports prepared by the ENGINEER under this contract shall, at the option of the OWNER, become its property, and the ENGINEER shall be entitled to receive just and equitable compensation for any satisfactory work competed on such documents prior to such termination.

B. Termination by OWNER for Convenience

1. OWNER hereby expressly reserves the right to terminate this Contract without cause and in its sole discretion and convenience, upon providing thirty (30) days written notice to ENGINEER.

C. Remedies of the OWNER

1. In addition to the right to terminate the contract, the OWNER shall also have the right to secure substitute services at the expense of the ENGINEER, require the ENGINEER to perform the promised services, withhold further payment from the ENGINEER until the services are performed.

D. Suspension, Delay or Interruption of Work

1. The OWNER may suspend, delay, or interrupt the services of the ENGINEER for the convenience of the OWNER. In the event of force majeure or such suspension, delay, or

interruption, the ENGINEER may request, and if the parties mutually agree, an equitable adjustment in the PROJECT schedule, and/or the ENGINEER'S compensation will be made pursuant to a written amendment to this Agreement signed by all parties hereto.

ARTICLE 8: AMENDMENTS

A. Any change to the ENGINEER's cost of or time required for performance of the services must be made through a written amendment to this AGREEMENT signed by all parties hereto. If deemed expedient, the OWNER may decrease the scope of work without affecting enforcement of this contract. If the work is not performed, the ENGINEER and the OWNER shall mutually agree upon the credit due to OWNER based on the reasonable value of the work deleted.

ARTICLE 9: INDEMNIFICATION AND ATTORNEY'S FEES

A. The ENGINEER shall indemnify, defend (with counsel acceptable to the OWNER), and hold the OWNER harmless from and against claims, liabilities, suits, loss, cost, expense, and damages to the extent arising from any negligent act(s) or omission(s) of the ENGINEER, his employees, officers, agents, subcontractors and affiliates, in performance of the work and services pursuant to this contract. Such indemnification shall include, but not be limited to, claims of breach of contract, or warranty, fault, tort, including negligence, strict liability, and statutory or regulatory violations.

B. Attorney's Fees and Other Expenses: In the event the ENGINEER brings a claim against the OWNER, or any claim is brought against the OWNER arising out of ENGINEER's work under this Agreement, and no adverse finding by the court is made against the OWNER as a result of such claim, the ENGINEER will reimburse the OWNER for all costs and expenses and attorney's fees associated with defending such claim.

ARTICLE 10: GENERAL PROVISIONS:

A. Re-Use of Project Documents

1. All designs, drawings, specifications, documents, and other Work Products of the ENGINEER are instruments of service for this PROJECT whether the PROJECT is completed or not are the property of the OWNER. The ENGINEER does not warrant or represent that any Work Products are suitable for use on any project other than this project, and that any such reuse without specific written authorization by the ENGINEER will be at the sole risk of the OWNER.

B. Force Majeure

1. The ENGINEER and the OWNER shall not be responsible for damages or delay in performance caused by acts of God, strikes, lockouts, or events within the exclusive control of the other party.

C. No Third Party Beneficiaries

1. This AGREEMENT gives no rights or benefits to anyone other than the OWNER and ENGINEER and has no third party beneficiaries.

D. Assignment

1. Neither party will assign all or any part of this AGREEMENT without the prior written consent of the other party.

E. Interpretation

1. Indemnities against, limitations on, and assumptions of liability and limitations on remedies expressed in this AGREEMENT shall apply even in the event of breach of contract, or warranty, fault, tort including negligence, strict liability, statutory, or any other cause of action (except for willful or reckless disregard of obligations) of the party released or indemnified, or whose liability is limited or assumed, or against whom remedies are limited. Party, as used herein, includes the named parties, their officers, employees, agents, subcontractors, and affiliates.

F. Jurisdiction and Venue

1. This is a Massachusetts Contract. The law of the Commonwealth of Massachusetts shall govern the validity of this AGREEMENT, its interpretation and performance, and any other claims related to it. Any actions resulting from the interpretation or performance of or related in any way to this AGREEMENT shall be brought in the Superior Court of Hampden County, Massachusetts, or the United States District Court for the District of Massachusetts, sitting in Springfield, Massachusetts.

G. Severability and Survival

1. If any of the provisions contained in this AGREEMENT are held for any reason to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provision, and this AGREEMENT shall be construed as if such, invalid, illegal or unenforceable provision had never been contained herein.

H. Safeguarding of Information

1. Any materials given to or prepared by the ENGINEER under this contract shall not be sold or otherwise made available to any individual or organization without prior approval of the OWNER.

I. Nondiscrimination

A. During the performance of this contract, the ENGINEER agrees as follows:

1. The ENGINEER will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national

origin is a bona fide occupational qualification reasonably necessary to the normal operation of the ENGINEER. The ENGINEER agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

2. The ENGINEER, in all solicitations or advertisements for employees placed by or on behalf of the ENGINEER, will state that such ENGINEER is an equal opportunity employer.

3. Notices advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this provision.

4. The ENGINEER will include the provisions of paragraphs (a), (b) and (c) above in every subcontract or purchase order so that the provisions will be binding upon every subcontractor or vendor.

J. Conflict of Interest

1. Upon the request of the Director or any authorized agent of the OWNER as a prerequisite for the payment pursuant to the terms of this contract, there shall be furnished to the OWNER a statement, under oath, that no member of his or her immediate family, including spouse, parent or children, or any other officer or employee of the City of Springfield or any member or employee of a Commission, Board, or Corporation controlled or appointed by the City of Springfield has received or has been promised, directly or indirectly, any financial benefit, by way of fee, commission, finder's fee, or in any other manner, re-numeration arising from or directly or indirectly related to this contract.

K. Prohibition Against Contingent Fees

1. The ENGINEER by entering into this Agreement certifies that it has not employed any company or person other than a bona fide employee working for us to secure this agreement and we have not paid or agreed to pay any person, company or corporation, individual or firms other than a bona fide employee working solely for us any favor commission, percentage, gift, or any other consideration contingent upon or resulting from the award of making this or any other agreement.

2. The ENGINEER understands that in the event of a breach or violation of the provision, the OWNER shall have the right to terminate this or any other agreement with our firms or individual without liability and at its discretion, to deduct from the contract price or otherwise recover, the full amount of such fee, commission, percentage, gift or consideration.

L. Entire Agreement

This AGREEMENT, including its Attachments and Schedules, constitutes the entire AGREEMENT, supersedes all prior written or oral understandings, and may only be changes by a written amendment executed by both parties.

K. ENGINEER'S Representations

By entering into this Contract with the OWNER, the ENGINEER represents and warrants the following, together with all other representations and warranties in the Contract Documents:

1. That the ENGINEER is experienced in and competent to perform the type of work required;

2. That the ENGINEER is financially solvent, able to pay the ENGINEER'S debts as they mature, and possesses sufficient working capital to initiate and complete the work required under the Contract;

3. That the ENGINEER is familiar with all Federal, State, County, Municipal and departmental laws, ordinances, permits, regulations and resolutions applicable to its work which may in any way affect the work of those employed therein, including but not limited to any special acts relating to the work or any part thereof;

4. That such temporary and permanent work required by the Contract which is to be done by the ENGINEER will be satisfactorily performed in accordance with paragraph 6 below;

5. That the ENGINEER will fully comply with all requirements of the Contract Documents;

6. That the ENGINEER will perform the work consistent with sound engineering practice, good workmanship, and sound business practices, and in the most expeditious and economical manner consistent with high industry standards and in the OWNER'S interest;

7. That the ENGINEER will furnish efficient business administration and experienced management and an adequate supply of employees at all times; and

8. That the ENGINEER will complete the work within the Project/Task Time, milestones, and price, unless adjusted by mutual agreement of the parties hereto.

9. The OWNER retains the right to procure similar engineering services outside of this contract if it deems it to be in the OWNER'S best interest.

M. Notices

1. Contractor Contact. The parties agree that **Thomas Jenkins** shall be the principal representative of the Vendor assigned to this agreement, available at **(413) 413.726.2121 or via email @ thomas.jenkins@gza.com.**

2. DPBRM Contact. The parties agree that **Peter Garvey** shall be the principal representative of the DCAC assigned to this agreement, available at **(413)787-6445 or via email @ pgarvey@springfieldCityhall.com.**

SIGNATURE PAGE LOCATED ON NEXT PAGE

Signed, under seal, by all parties on the dates indicated:

GZA GeoEnvironmental, Inc.:

By TOM JENKINS, J.P.
Date Signed 12.13.17

CITY OF SPRINGFIELD

Approved:

Executive Director, DCAC
Date Signed 12-19-17

Approved as to Appropriation: N/A

City Comptroller
Date Signed 12/20/17

Approved:

Office of Procurement
Date Signed: 12-14-17

Approved as to Form:

City Solicitor
Date Signed 12-21-17

Approved:

Acting CAFO
Date Signed 12/22/17

Approved:

DOMENIC J. SARNO
Date Signed 12/26/17

CORPORATE CERTIFICATE

*THIS MUST BE THE NAME OF THE PERSON AUTHORIZED IN YOUR BY-LAWS TO SIGN CONTRACTS ▪

**SINCE AN OFFICER CANNOT CERTIFY TO HIMSELF, SOMEONE MUST SIGN THIS OTHER THAN THE PERSON SIGNING THE CONTRACT ▪

I, ** Kenneth R. Johnston A Resident of Salem in

The State of New Hampshire DO HEREBY CERTIFY: that I am the Clerk/

Secretary of G2A GeoEnvironmental, Inc

A Corporation duly Organized and existing under and by virtue of the laws of the

State of Massachusetts

And that I have custody of the records of such Corporation: and that as of the date herein below recited

* Thomas E. Jenkins Associate Principal, Vice President

(Officer, person who is signing the Contract) (Title)

Authorized to execute and deliver in the name and on behalf of the CORPORATION the following:

GZA GeoEnvironmental Inc.

CONTRACT NO.20180195

On-Call Engineering Services-Horizontal Construction

WITNESS WHEREOF, I have hereunto set my hand and affixed the Corporate Seal

Of such corporation this 13th day of December 2017

** Kenneth R. Johnston

Exhibit A

CITY OF SPRINGFIELD, MASSACHUSETTS
OFFICE OF PROCUREMENT
36 COURT STREET, ROOM 307, SPRINGFIELD, MA 01103

Request for Proposals

RFP Number 18-010, On-Call Professional Engineering (Public Works Construction) Services

Will be received at the Office of Procurement until 2:00 P.M. August 9, 2017 and will be logged in at that time. Proposals received after the due date and time will be returned unopened.

All packages must be marked with Proposer's business name, the above RFP number and the due date.

By: **Lauren Stabilo, Chief Procurement Officer**

This Request for Proposal is for: **On-Call Professional Engineering (Public Works Construction) Services** (Per the attached specifications)

As requested by: **Department of Capital Asset Management and Department of Parks, Buildings, and Recreation Management**

THIS FORM MUST BE COMPLETED, SIGNED, AND RETURNED WITH Proposal.

This Proposal is submitted by:

_____
(Company Name)

_____
(Company Address)

I acknowledge receipt of addenda numbered: _____, _____, _____, _____, _____.

signed by:

_____
(Printed or Typed Name and Title)

_____/_____/_____
(Signature and Date)

Telephone Number: _____

Fax: _____

Email Address: _____

ADVERTISEMENT
CITY OF SPRINGFIELD, MASSACHUSETTS
OFFICE OF PROCUREMENT

Request for Proposals: On Call Professional Engineering (Public Works Construction) Services

Per RFP No. 18-010

will be received until 2:00 PM: ***August 9, 2017*** BY:
THE OFFICE OF PROCUREMENT
LAUREN STABILO, CHIEF PROCUREMENT OFFICER
36 COURT STREET ROOM #307, SPRINGFIELD, MA 01103
PHONE (413) 787-6285 FAX 787-6295

at which time the bids will be privately opened and logged at the Office of Procurement.

RFP specifications can be requested in person at the Office of Procurement during normal business hours or through the City's website, www.springfieldcityhall.com, for no charge beginning on 7/26/17.

The City through its Department of Capital Asset Construction and its Department of Parks, Buildings and Recreation Mgt. wishes to engage multi-disciplined Engineering firms for a variety of important services on an "as needed" basis. Services will include, but not be limited to: site assessment of existing facilities, construction documents and bidding, feasibility studies, etc. for public works construction projects.

The Term of the contract will be for One year, with two (2) one-year in length renewal options, to be exercised at the City's sole discretion. The City anticipates contracting for approximately $750,000 in design services/per firm annually. Up to Five (5) firms may be awarded a contract, at the sole discretion of the City.

All questions regarding bid or its specifications must be made in writing and received by the Office of Procurement no later than 8/2/17, 4:30 P.M. in order to be considered. Answers to questions will be made through numbered addenda issued by the City.

The City of Springfield supports the goal of twenty percent minority and women participation in all contracts. The Chief Procurement Officer reserves the right to waive any informality in and to reject any or all bids if it is in the public interest to do so.

Note: to newspaper; Insert the above advertisement in the Springfield Union-News ONLY under the heading "Legal Notice" on: **July 27, 2017**
Phone: 787-6284
REFERENCE: 4137844898 per bid number RFP No. 18-010

City of Springfield

Request for Proposals For On-Call Professional Engineering (Public Works Construction) Services

RFP No. 18-010

Proposal Due Date: August 9, 2017, 2:00 P.M. EST

I. INTRODUCTION

A. General

1. The City of Springfield, Massachusetts (the 'City"), acting through the Chief Procurement Officer and both the Department of Capital Asset Construction and the Department of Parks, Buildings, and Recreation Management ("DCAC/DPBRM"), issues this Request for Proposals (the "RFP") to qualified Engineering Firms (individually referred to as a "Proposer") who wish to submit proposals to provide on-call professional engineering services.

2. As these are Design Services for "public works project", these services are not subject to the Designer Selection Law (M.G.L. Chapter 7C, §§ 44-57), and will instead follow a traditional Request for Proposals (RFP) model, similar to a M.G.L. Ch. 30B procurement. As the service is also exempt from the Uniform Procurement Act, the City of Springfield reserves the right to deviate from that model if necessary.

3. Proposers must meet all Minimum Criteria contained in **Section I (C)**. Proposers who do not meet the minimum criteria will be removed from further consideration. Proposers who meet the Minimum Criteria will have their Technical Proposals (see **Section IV** for form) evaluated against the Comparative Criteria (see **Section VI**) and ranked by the RFP committee. After all proposals are ranked, Price Proposals will also be evaluated to determine the overall most advantageous proposer for these services.

4. Proposals will be analyzed by a review committee made up of representatives from the Springfield Public Schools, the Office of Procurement, DCAC, DPBRM, and possibly other City Departments. Supplemental information may be requested by the City and obtained from Proposers. In connection with the evaluation of Proposals, oral presentations may be requested of all or some of the Proposers.

5. The City considers any information, which may have been released either in writing or orally prior to the issuance of the official RFP to be preliminary in nature and the City shall not be bound by any such information.

6. Brokers are not allowed to submit proposals on behalf of any firm and submissions will only be accepted from firms licensed to do work in the State of Massachusetts. Persons signing the proposal must have the authority to contractually bind the submitting firm to the City of Springfield for any and all tasks if the firm is selected by the City. Proposers may not submit alternate proposals.

B. Contract Information

1. The initial term of the contract shall be for One (1) Year, and the City will retain Two (2) one-year in length renewal options, to be exercised at its sole discretion. Proposers must submit proposals for the entire term (i.e. the initial term and the two renewal terms). Proposals for a portion of the term will be rejected. The City of Springfield purchasing department will submit a renewal in writing approximately sixty (60) days prior to the expiration date of the price agreement.

2. Estimated value of each contract is an amount not to exceed **Seven Hundred Fifty Thousand Dollars and 00/100 ($750,000.00)** per contract term, unless otherwise amended.

3. The awarded contract will be in a similar form as the Sample Contract attached to this IFB as **Exhibit A**. Submission of RFP proposal indicates that the Proposer is ready, willing, and able to enter into a service contract with the City and agrees to be bound to the terms and conditions of **Exhibit A**.

4. The City reserves the right to solicit other proposals for work that is not a part of this proposal. No guarantee of actual service requests is guaranteed. The contract resulting from this RFP will be for monitoring services only. Any installation or purchases of equipment will be made under separate agreement.

5. The City reserves the right to award up to Five (5) contracts from the RFP. The amount of contracts awarded under this RFP dependent on the discretion and estimated need from the DPBRM and DCAC.

C. Minimum Criteria

1. In order to be responsive to this request for proposals, the following minimum criteria ("Minimum Criteria") must be satisfied. Each proposal must clearly state how the Proposer meets the Minimum Criteria set forth in this section. All of the above minimum evaluation criteria must be addressed in the Cover Letter submitted to the City of Springfield. **Proposals that do not meet the following Minimum Criteria may be rejected:**

i. Proposer must have Ten (10) years' experience of providing similar on-call engineering experience.
ii. Project Manager must have a minimum of 3 continuous years' service with current firm.

iii. Proposer can provide references that indicate the firm has met requirements on other projects; the firm is not difficult to work with or has otherwise not failed to meet expectations.
iv. The Proposer is duly qualified and licensed to perform professional engineering services, including all ancillary services associated with professional engineering in the state of Massachusetts
v. Office designated as "prime work location" must be able to respond to request for Service and be on-site anywhere within the border of the City of Springfield within Two Hours' notice.

II. RFP SUBMISSION INFORMATION

A. Questions and Addenda

1. **Questions regarding the RFP** should be in writing and delivered via email or facsimile (413) 787-6295 to:

Office of Procurement
Attn: Theo G. Theocles, Deputy Procurement Officer
City Hall – Room 307
36 Court Street
Springfield, MA 01103
ttheocles@springfieldcityhall.com

2. All inquiries related to the requirements should prominently refer to **"RFP No. 18-010, On-Call Professional Engineering (Public Works Construction) Services"**, and the RFP opening date. In order to be considered, questions must be made in writing and received by the Office of Procurement no later than **August 3, 2017 at 4:30 P.M.** Responses to inquiries will be in the form of a numbered addendum to the specifications issued by the Office of Procurement and sent to all parties listed in the RFP file as Proposers(s) holding the RFP documents. Proposers should base responses only on the specifications including any addenda, which will become exhibits to the RFP document. The City, in its sole discretion, may decline to provide the information requested.

3. PLEASE NOTE that all addenda must be acknowledged either in the RFP response (there is a space for that purpose on the RFP cover sheet) when submitted or by following the instructions on the addendum cover sheet. If using the latter means to acknowledge receipt, the Proposer must write the business name of the firm, sign the sheet and fax it to (413-787-6295) and/or include a copy of the sheet in the RFP response. Failure to acknowledge any addendum may cause rejection of a RFP response as required by Massachusetts General Laws. **Proposer(s) are advised to call the Office of Procurement (413-787-6284) before sending their RFP responses to confirm that all addenda are accounted for.**

B. Required Forms

1. The Contractor understands that the following documents included in this RFP must be included in the Contractor's response to this RFP. If Contractor fails to provide all documents requested below, the RFP may be rejected by the City.

2. Required Documents are documents that must be completed and submitted in your RFP response package and received at Procurement before the time set for receipt. Review your RFP response carefully to be sure all requirements are included.

3. Unnecessary samples, attachments or other documents not specifically asked for should not be submitted. Please enter the firm price in the space provided on your **Price Proposal**, which is to be submitted in a separate sealed envelope from the **Technical Proposal**. Required Documents are documents that must be completed and submitted in your RFP response package and received at Procurement at or before the time set for receipt.

> **i. Technical Proposal- (One (1) original RFP Technical Proposal and Six (6) hard copies) which shall include all required items, information, and a detailed Plan of Services explaining how the Project will be implemented (See Section IV), and addressing all minimum criteria, however, the Price Proposal shall not be submitted with the Basic Proposal; and,**
>
> **ii. Price Proposal) – which shall include only the proposed prices for the services for the initial term and the two one year renewal terms.**

4. The following documents require responses and must be included in the *sealed* RFP response package (See, **Exhibit B; Required Documents**):

1. RFP Coversheet **(signed)**
2. Technical Proposal **(1 Original and 6 Copies, See Section IV for required information)**
3. RFP Pricing Proposal **(to be submitted in a separate sealed envelope from the Technical Proposal)**
4. **Exhibit A**, Sample Contract **(included for Proposer review only, not for RFP submission)**
5. Non Collusion/Fraud Form
6. Tax Certification Affidavit **(signed and notarized)**
7. Affirmative Action Form
8. Acknowledgment of all Addenda **(if issued)**
9. Client References
10. All other forms to be completed signed and notarized where applicable

C. Submission Format

1. Submission of RFPs. **Proposers are required to submit one (1) original RFP Technical and Proposal Six (6) hard copies, as well as One (1) original Price Proposal, to be submitted in a separate sealed envelope.** See **Section IV** for form and structure of Technical Proposal. Any RFPs must be submitted in sealed envelopes each of which shall be clearly identified on the

outside as; package **"RFP No. 18-010, On-Call Professional Engineering (Public Works Construction) Services".** The RFP envelope shall be placed inside a single container (box, envelope, etc.) clearly identified on the outside as Contractor's name; package **"RFP No. 18-010, On-Call Professional Engineering (Public Works Construction) Services"** with RFP number and opening date, with Price Proposal in a separate package. The proposal shall be delivered to the address below:

The Office of Procurement
City of Springfield
Attention: Lauren Stabilo, Chief Procurement Officer
36 Court Street, Room 307
Springfield, MA 01103

2. Proposer forms shall be completed in ink, computer or by typewriter. RFPs by corporations shall be executed in the corporate name by the president or other corporate officer accompanied by evidence of authority to sign and attested by the secretary or an assistant secretary, the corporate address and state of incorporation shall appear below the signature. RFPs by partnerships shall be executed in the partnerships name and signed by a partner, whose title shall appear under the signature. The official address of the partnership shall be shown below the signature. RFPs by joint ventures shall be similarly executed by all joint venture partners. All names shall be typed or printed below the signatures.

3. Each RFP submitted shall contain an acknowledgment of receipt of all addenda (the numbers of which shall be filled in on the form). The address to which communications regarding the proposal are to be directed shall be shown.

4. A Proposer may correct, modify or withdraw its proposal by written notice received by the City and the address specified above prior to the time and date specified for receipt of RFPs. After such time, a Proposer may not change its proposal in a manner prejudicial to City or fair competition. All submitted RFP pricing will be held firm by the City for a period of not less than Ninety (90) days.

5. The City shall notify the selected Proposer within the time for acceptance specified above. The selected Proposer will be required to sign a contract with the City (See Contract Form in **Exhibit A**), consistent with this RFP proposal, within ninety (90) days of receipt of notice of award. Inclusion of any conditions in a proposal response to this RFP proposal, which deviate from this RFP proposal, shall be cause for rejection of the proposer's response to this RFP proposal.

6. RFP responses must be received by **2:00 PM EST on August 9, 2017**. RFP responses received after the RFP opening time will **not** be accepted. RFPs delivered to any other office or location will be rejected as non-responsive. If at the time of the scheduled RFP due date, City Hall or the Office of Procurement is closed due to uncontrolled events such as fire or building evacuation, the RFP opening will be postponed until 2:00 PM on the next normal business day. RFP's will be accepted until that date and time.

7. Proposals shall be delivered by U.S. Mail, overnight delivery service (e.g. UPS or Federal Express), or by hand. Delivery by facsimile or electronic mail is prohibited. It is the Proposer's sole responsibility to ensure that its proposal is received at the proper location on or prior to the deadline.

D. Award Information

1. As provided in M.G.L. c. 30B, §6, the proposals shall not be opened publicly, but the City shall cause them to be opened in the presence of one or more witnesses at the time specified above. Until the completion of the evaluations, or until the time for acceptance specified above, whichever occurs earlier, the contents of the proposals shall remain confidential and shall not be disclosed to competing Proposers. At the opening of proposals, the City shall prepare a register of proposals which shall include the name of each Proposer and the number of modifications, if any, received. The City may open the price proposals at a later time, and shall open the price proposals so as to avoid disclosure to the individuals evaluating the proposals on the basic criteria other than price.

2. The City shall determine the most advantageous proposal from a responsible and responsive Proposer taking into consideration price and the evaluation criteria set forth in the RFP. The City shall award the contract by written notice to the selected Proposer within the time for acceptance specified above. The parties may extend the time for acceptance by mutual agreement. The City, in its sole discretion, may condition an award on successful negotiation of revisions to the Proposers Plan of Services as specified by the City in the evaluation. However, Proposers shall not specify items for negotiation in their proposals or otherwise condition their proposals on negotiations of requirements in the RFP, including requirements of the contract. Inclusion of any such condition in a proposal shall be cause for rejection of the proposal.

3. If the City awards the contract to a Proposer who did not submit the lowest price, it shall explain the reasons for the award in writing, specifying in reasonable detail the basis for determining that the quality of services under the contract will not exceed its actual needs.

4. As provided in M.G.L. c. 30B, §12, the City may not enter into a contract unless funds are available for the first fiscal year at the time of contracting. Payment and performance obligations for the succeeding fiscal years shall depend upon the availability and appropriation of funds. The City, therefore, must reserve the right to cancel the contract if funds are not appropriated or otherwise made available to any fiscal year succeeding the first year.

E. Estimated Procurement Calendar

EVENT	**DATE**
SOLICITATION: RELEASE DATE	July 25, 2017
DEADLINE FOR SUBMISSION OF WRITTEN QUESTIONS TO CITY OF SPRINGFIELD – OFFICE OF PROCUREMENT	August 3, 2017, 4:30 P.M.

OFFICIAL ANSWERS PUBLISHED (ESTIMATED)	August 4, 2017, 4:30 P.M.
SOLICITATION CLOSE DATE / SUBMISSION DEADLINE	August 9, 2017, 2:00 P.M.
ANNOUNCEMENT OF AWARDED PROPOSER(S) (ESTIMATED)	No later than August 18, 2017
CONTRACT(S): ESTIMATED CONTRACT START DATE	No later than August 18, 2017

E. Reservation of Rights

The City reserves the right to:

1. Reject any or all proposals. The City may cancel this RFP, or reject in whole or in part any and all RFP's. If the City determines that cancellation or rejection serves the best interest of the City.

2. Conduct investigations with respect to the qualification of each Proposer (including a site visit) or to verify documentation submitted.

3. Supplement, amend or otherwise modify this RFP, and to cancel this RFP with or without the substitution of another RFP.

4. Issue additional subsequent solicitations for proposals

5. Reevaluate a proposal or award if substitutions of Key Personnel or other changes proposed prior to execution of the contract.

6. Perspective proposers are advised that, from the date of advertisement of this RFP until the award of any resultant contract, they are not permitted to contact any City employee about any matter related to this RFP, unless they have received the permission of the Chief Procurement Officer. The restriction also extends to any broker / agent representing any firm. Any violations of the restriction clause committed by a firm, or broker / agent of a firm, are grounds for rejection of their bid.

F. General

1. Incurring Cost. The City shall not be held liable for any proposal preparation or, if awarded a contract, for any pre-contract activity or costs incurred by any proposer in the preparation of their proposal, preparation or presentation at an interview, during any negotiations regarding the contract, or in execution of the contract.

2. Oral Presentations / Interviews. The City may require proposers to give oral presentations / interviews regarding their proposal and / or to demonstrate the firm's capabilities to provide the City of Springfield with the necessary services required under the contract. Agents and / or

brokers of any proposer will not be allowed at any presentation / interview. If shortlisted for an interview, the proposer will be notified of the exact requirements to be addressed at the interview.

3. Disclosure of Proposals Upon submission, proposals and other materials submitted by the Proposers become records subject to the freedom of information laws of Massachusetts. The City may deny the public access to such records or applicable portions of any submission which are deemed to be "trade secrets" or are maintained for the regulation of commercial enterprise which, if disclosed, would cause "substantial injury to the competitive position of the subject enterprise", "are specifically exempt from disclosure by State or Federal statute", or are otherwise exempted from disclosure under law. Cost proposals / rates are not to be considered as confidential or trade secrets.

4. Examination of Specifications. The proposer shall carefully examine the RFQ/P and all other documents and data associated with this contract, and become familiar therewith. The Proposers shall not at any time after executing a contract, make any claims whatsoever alleging insufficient data or incorrectly assumed conditions, nor shall he claim any misunderstandings with regard to the nature, conditions, or character of the work to be completed under this contract.

III. SCOPE OF SERVICES

A. Scope Overview

1. The City of Springfield acting through its Department of Capital Asset Construction (DCAC) and the Department of Parks, Buildings, and Recreation Management wishes to engage one or more multi-disciplined engineering firms for a variety of services on an "as-needed" basis.

2. The procurement will cover the general engineering needs of the DPBRM and DCAC and various other City Departments. The work will be generally related to City facilities and parks, and may also require significant coordination and direction with the Department of Parks, Buildings and Recreation Management.

3. Services include, but are not limited to:

i. Consultation and Advice
ii. Feasibility Studies
iii. Field Investigation and Engineering Data Collection
iv. Engineering Reports
v. Land Surveying
vi. Construction Cost Estimating
vii. Design Services, whole or in part
viii. Construction Management and Inspection
ix. Materials Testing
x. Value Engineering
xi. Expert Testimony
xii. Sustainability Design

xiii. Environmental Assessments and Permitting
xiv. Preparation of O&M Manuals
xv. State of Federal Agency Mandate Compliance

B. Specialized Services

1. The Consultants may be required to accomplish projects which require special expertise and/or are too large for execution by City staff. Typical areas of expertise to be needed under this agreement include but are not limited to:

i. Architectural Services
ii. Materials Testing
iii. Aerial Surveys
iv. Bridge Engineering
v. Composting
vi. Construction Inspection & Administration
vii. Construction Management
viii. Dam Studies and Designs
ix. Project Planning
x. Mechanical / Electrical / Plumbing Engineering
xi. Environmental Permitting
xii. Environmental Sciences and Engineering
xiii. Geographic Information Systems
xiv. Flood Control Systems
xv. Highway and Street Engineering
xvi. Lake and Pond Management Studies and Analyses
xvii. Land Surveying
xviii. Building Inspections and Assessments
xix. Mechanical Engineering
xx. Pavement Management
xxi. Solid Waste Management
xxii. Traffic Engineering
xxiii. Hazardous Material
xxiv. Geotechnical Engineering
xxv. Value Engineering

2. The selected engineering firm(s) will provide a wide range of design and specialized consulting services through the medium of appropriately staffed divisions, sub-consultants or subsidiary organizations.

3. To be properly qualified to render specialized engineering services, the division, sub-consultant or subsidiary organization must be directed by a professional engineer with training and experience in the specialized field.

4. The Consultants will have prime responsibility for all aspects of the projects as assigned. It is understood that the Consultant selected may not have on-staff all of the fields of expertise and engaging sub-consultants may be necessary on some projects.

5. With regard to sub-consultants, if firms identify specific outside firms to prove certain services, the required information identified in the Scope of Services outlined in this RFP. Depending upon the services identified, it may be necessary to have the sub-consultant attend the oral presentation / interview, if invited.

6. This procurement and scope of services will be limited to the extent that statutory procedures govern the selection of engineers for certain types of projects.

C. City Contacts

1. Springfield Department of Capital Asset Construction Contact: Peter Garvey, Executive Director, 36 Court Street Springfield, MA 01103. Tel: 413-787-6445, Email: pgarvey@springfieldcityhall.com.

2. Springfield Department of Parks, Buildings and Recreation Management Contact- Patrick Sullivan; Director, 200 Trafton Road Springfield, MA 01108, psullivan@springfieldcityhall.com.

IV. TECHNICAL PROPOSAL; CONTENTS AND FORM

A. Submission Format

1. In order to be responsive to this request for qualifications, the Proposer must provide, at a minimum, the following information in their Technical Proposal. The submission package should be in the sequence and format listed as follows. The City will not accept electronic or telegraphic proposals. Each Section must be tabbed and titled as requested below.

2. Submission should have divider pages/tabs and be titled as stated:

i. Cover Letter
ii. Executive Summary
iii. Tab 1 – Team Organization
iv. Tab 2 – Background of Firm
v. Tab 3 – Professional Personnel
vi. Tab 4 – Quality Assurance Plan
vii. Tab 5 – Affirmative Action Plan
viii. Tab 6 – Required Forms (See **Exhibit B)**
ix. Hourly Rates- HOURLY RATES ARE TO BE SUBMITTED AS THE PRICE PROPOSAL SECTION OF THE RFP SUBMISSION. PRICING MUST BE SUBMITTED IN A ***SEPARATE SEALED ENVELOPE*** AND CANNOT BE ATTACHED WITH TECHNICAL PROPOSAL!

B. Cover Letter

At a minimum, the Cover Letter must:

1. Provide a list of Similar Municipal Engineering Experience – also specify if any work is under a similar On-Call arrangement

2. Identify the Project Manager

3. State that the submitting firm has an office in the State of Massachusetts

4. State that the Project Manager is a Registered Professional Engineer in the State of Massachusetts and has been with the current firm for a minimum of Three (3) years.

5. Includes a statement that the proposer accepts all terms and conditions contained in the RFQ/P

6. Provide a statement that addenda has been received, reviewed and accepted as part of the RFP.

7. A list of all of the Proposer's office locations with street addresses and telephone numbers.

C. Executive Summary

1. This section should a brief overview of material included the following sections and include all requested statements or exceptions noted by the proposer.

2. This section should also include all of the required forms fully executed including:

i. Cover Page
ii. Affirmative Action Plan
iii. Tax Certification Affidavit for Contractors
iv. Collusion or Fraud Statement
v. Signed Addenda (if Issued)

D. Tab 1 – Team Organization

1. The proposer must provide a listing of required services that the firm will be providing, along with which services will be provided by any sub-consultants.

2. The proposer must also submit an organizational chart that clearly identifies the Project Manager, the services that will be provided, and the individuals who will be providing those services, and which firm they are associated with, if they are with a sub-consultant.

3. Identification of Key Personnel. The names and experience of Key Personnel that will be assigned to provide the services described in this request for proposal. Please state the reasons

why the proposed organization and team members are considered appropriate for the project. Please provide, for each person:

i. Name, title and current business address.
ii. A current resume showing education, previous employers, nature of work performed for the employer, and dates of employment.
iii. Length of time employed with the Proposer and the person's current assignment(s).
iv. A description of the nature, size, and complexity of previous alarm monitoring experience with a specific description of any previous assignment assisting a government client.

E. Tab 2 – Background of Firm – Project Experience

1. Please include the following information in this section:

i. Firm Name
ii. Parent Company (if any) and year acquired
iii. Year Established
iv. Any former name that firm has been known by
v. Business address of Parent Company (if any)
vi. Business address of office to be in primary charge of the work
vii. Name of Project Manager
viii. Name of Person to Contact with any questions about proposal
ix. Name of Firm Principals, where registered and current professional standing
x. Type of Services that primary firm is qualified to provide.
xi. Listing of Primary Firm and Sub-consultant Qualifications

2. This section should also include a narrative section on relevant experience of the primary firm and all included sub-consultants. Individual project pages are acceptable, however, all experience listed should only be from the last Five (5) years to be considered relevant. Project information should include references. See Reference form, contained in **Exhibit B**, *Required Forms*

F. Tab 3 – Professional Personnel – Resumes

1. This section shall include resumes of all individuals from the primary firm and sub-consultants to be involved in this assignment with the City of Springfield. The resumes shall be limited to two pages in length, include the number of years an individual has been with the current firm and identify which specific area of expertise the individual will provide under headings such as:

i. Civil Engineers
ii. Structural Engineers
iii. Landscape Architects
iv. Transportation Engineers
v. Electrical Engineer
vi. Geotechnical Engineer
vii. Land Surveyor

viii. Environmental Engineer
ix. Licensed Site Professional
x. Construction Administrator / Inspector / Management
xi. Architects
xii. Etc.

2. The resume of the Project Manager can be more than 2 pages in length. The Project Manager must have:

i. A minimum of 10 years' experience
ii. Bachelor's Degree in Engineering
iii. Must have been with the current firm for a minimum of 3 years
iv. Must be a registered Professional Engineer in Massachusetts
v. Must have acted as Project Manager on similarly size On-Call Contracts in the recent past with the current company.

G. Tab 4 – Quality Assurance Plan

1. The proposer must include a copy of the firm's Quality Assurance Plan in this section. The selected consultants shall perform all work to the highest standards of professional care. The consultant shall establish and maintain a Quality Assurance Plan, subject to the Owners approval, setting forth the Consultants policy for Quality assurance and procedures for implementing that policy.

2. Any such plan must apply to all employees engaged in work under this assignment, include regular and written procedures for performance of all project activities, and provide sufficient information to senior managers to enable effective supervision of project.

3. The submitted Quality Assurance Plan must provide details of your internal control system, which controls the following areas at a minimum:

i. Design Review and Quality Assurance
ii. Project Scheduling
iii. Personnel Assignments and Scheduling
iv. Financial Control

H. Tab 5 – Affirmative Action Plan

1. The proposer must submit a copy your firm's Affirmative Action Plan. Please provide in this Section your firm's policies and goals in regards to the recruitment of minority men and women.

I. Tab 6- Required Forms

1. Please see **Exhibit B** to this RFP for all other required information and forms to be submitted with proposals. Please attach forms in this tab section.

J. Other Relevant Information

1. The Proposer should include any other information that demonstrates the Proposer's qualifications to perform the services described in **Section III**, *Scope of Services*, and otherwise demonstrates satisfaction with the requirements of this RFP.

V. FEE PROPOSAL

A. Fee Schedule - Hourly Rates

1. The contractor shall include in this section a complete list of hourly rates for the primary firm and for all sub- consultants. The rates should be in a combined format rather than separate sheets for each firm, if appropriate. Contractor must also identify how project expenses will be addressed and charged.

2. Proposers must state in the Executive Summary portion of their submittal if they will renew the contract for the second and third years at the hourly rates included in the original submission or if new hourly rates will be submitted

3. Proposers shall submit in a separate envelope (See **Section II**, *RFP Submission Instructions*) a price proposal outlining total proposed compensation for performance of the services over the term of the contract.

4. Please submit pricing separately from Technical Proposal. No pricing information is to be included with the Technical Proposal.

5. Proposer should include ***ALL HOURLY*** rates for ***ALL SERVICES*** offered and listed in this RFP.

VI. COMPARATIVE EVALUATION CRITERIA

A. Any proposer who does not meet all of the outlined submission requirements, including submission of all necessary forms and documents and minimum criteria will be rejected, deemed non responsive, and will not be considered for the contract.

B. Selection Committee

1. The City will be assembling a selection committee for this project. At this time the members have not been identified.

C. Selection Process

The City will be using the following general selection process;

1. Review of Technical Proposals. Upon receipt of all submissions deemed to meet all of the outlined submission requirements, the selection committee will review independently all of the

proposals using the Consultant Ranking Form located in **Exhibit C** for each Proposer. Proposers will then be ranked from Most to Least Advantageous based upon scores achieved.

2. Review of Price Proposals. After ranking Proposers based on Technical Proposals received, the RFP review committee will request pricing from the Office of Procurement and review hourly pricing information. The RF review committee will then rank proposals in total and recommend the most "Highly Advantageous" proposal(s) for contract award.

3. If deemed necessary by the City, oral presentations / interviews will be held by the City. Specific selection criteria used in the interview process will then be distributed to the firms selected for interviews.

D. General

1. Proposals that meet the Minimum Criteria will be further evaluated and rated on the basis of the following Comparative Criteria. The City reserves the right to ask any Proposer to provide additional supporting documentation in order to verify its response.

E. Ranking Rubric

2. Ratings of (i) Highly Advantageous ("HA"); (ii) Advantageous ("A"); (iii) Not Advantageous ("NA"); or (iv) Unacceptable ("U") will be given to each of the following criteria for each Proposer. A composite rating will then be determined. A composite rating of "Highly Advantageous" or "Advantageous" may be assigned only if a proposal has received at least one such rating among the criteria listed below.

F. Comparative Criteria

1. Proposer has provided similar services to similarly sized and situated Community

Firm has less than two years of experience with a similarly sized and situated Community
Unacceptable

Firm has between two and four years of experience with a similarly sized and situated Community
Not Advantageous

Firm has between five and seven years of experience with a similarly sized and situated Community
Advantageous

Firm has more than seven years of experience with a similarly sized and situated Community
Highly Advantageous

2. Project Manager possesses significant diversified engineering experience.

The firm's Project Manager has no significant diversified engineering experience.
Unacceptable

The firm's Project Manager has some diversified engineering experience.
Not Advantageous

The firm's Project Manager has a significant diversified engineering experience.
Advantageous

The firm's Project Manager has a great deal of demonstrated and significant diversified engineering experience.
Highly Advantageous

3. Quality of references

References were not provided by the firm
Unacceptable

References indicate the firm has not met requirements on other projects; the firm is difficult to work with or has otherwise failed to meet expectations.
Not Advantageous

Reference indicate that the firm was responsive and met all requirements of other projects, but did not exceed expectations
Advantageous

References indicate that the firm exceeded client expectations and that its work added significant value to the client.
Highly Advantageous

4. Qualifications of Key Personnel Identified in Proposal

Qualifications of Personnel listed are lacking or do not meet requirements of City, or Key Personnel are not listed
Not Advantageous

Qualifications of Key Personnel listed are adequate.
Advantageous

Qualifications of Key Personnel listed are exemplary and more than address the needs of the City as identified in the Scope of Service in the RFP.
Highly Advantageous

5. Evaluation of the quality, completeness, and appropriateness of the proposed project approach and qualifications of the Proposer described in the Proposer's Technical Proposal.

The project approach is well explained, complete, appropriate, meets or exceeds all of the requirements of the City and presents unique advantages to the City.
Highly Advantageous

The project approach is well explained and complete, meeting, or exceeding in some areas, all of the needs of the City.
Advantageous

The project approach is explained and complete and meets, but does not exceed, the basic requirements of the City.
Not Advantageous

The project approach is not clear or fails to meet the needs of the City.
Unacceptable

MINIMUM CRITERIA

1. Proposer must have Ten (10) years' experience of providing similar on-call engineering experience.

YES_____ **NO**_____

2. Project Manager must have a minimum of 3 continuous years' service with current firm.

YES_____ **NO**_____

3. Proposer can provide references that indicate the firm has met requirements on other projects; the firm is not difficult to work with or has otherwise not failed to meet expectations.

YES_____ **NO**_____

4. The Proposer is duly qualified and licensed to perform professional engineering services, including all ancillary services associated with professional engineering in the state of Massachusetts.

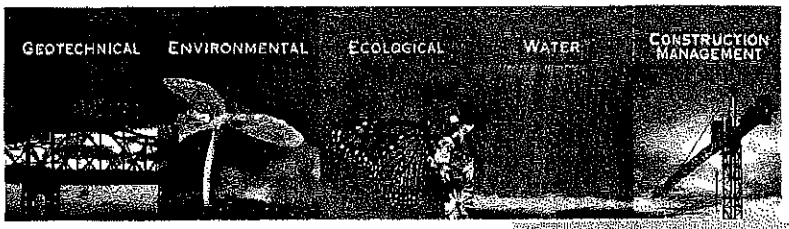
YES_____ **NO**_____

5. Office designated as "prime work location" must be able to respond to request for Service and be on-site anywhere within the border of the City of Springfield within Two Hours' notice.

YES_____ **NO**_____

Exhibit B

Proactive by Design



ORIGINAL

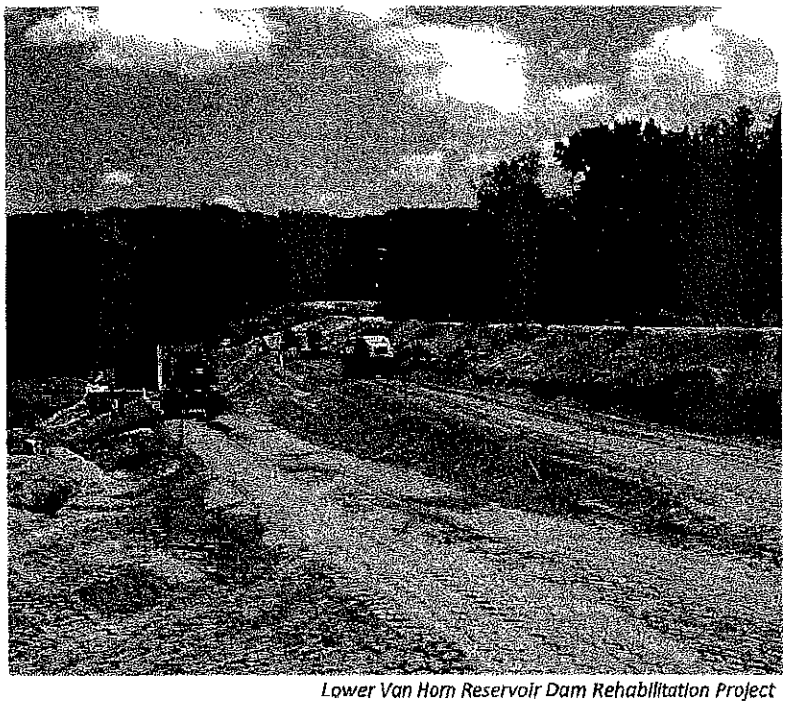
Proposal for Professional Services

On-Call Professional Engineering (Public Works Construction) Services

RFQ No. 18-010

Submitted to:
Lauren Stabilo, Chief Procurement Officer
City of Springfield - Office of Procurement
36 Court Street – Room 307
Springfield, Massachusetts 01103

August 11, 2017



Lower Van Horn Reservoir Dam Rehabilitation Project
August, 2017

GZA GeoEnvironmental, Inc.
1350 Main St, Suite 1400 | Springfield, MA 01103
413-726-2100

28 Offices Nationwide
www.gza.com

GZA

Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
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CONSTRUCTION MANAGEMENT

1350 Main Street
Suite 1400
Springfield, MA 01103
T: 413.726.2100
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www.gza.com

August 11, 2017
15.P000053.18

City of Springfield
Office of Procurement
36 Court Street – Room 307
Springfield, Massachusetts 01103

Attention: Lauren Stabilo, Chief Procurement Officer

RE: Proposal for Professional Services
RFP No. 18-010
On-Call Professional Engineering Services (Public Works Construction)

Dear Ms. Stabilo:

GZA GeoEnvironmental, Inc. (GZA) is pleased to submit to the City of Springfield our response and proposal to provide On-Call Professional Engineering Services as outlined in your Request for Proposals (RFP No. 18-010, July 27, 2017). GZA's response is based primarily upon our extensive successful practice as one of the oldest and most diverse geotechnical and engineering consultants in the northeast, the excellent working relationships our staff have developed with the City of Springfield over the last 25 years, and our familiarity with providing on-call engineering services to other municipalities and state agencies.

We recognize that the City will likely receive a significant number of responses from other qualified firms. Respecting your review timetable and to summarize what distinguishes GZA from other firms, we highlight:

- GZA's numerous successfully-concluded City of Springfield park and drainage-related projects, dam studies and designs, lake and pond analyses, geotechnical engineering, environmental assessments and remediation support, and construction phase services that clearly illustrate our technical and management competency and understanding of the City's operations and work requirements;
- The diversified engineering experience of GZA's proposed Project Manager and Principal-in-Charge, Tom Jenkins, P.E., and the broad range of services that GZA and our identified subconsultants can provide; and
- GZA's downtown Springfield office, demonstrating our commitment to the community and providing a strong local presence that is cost effective and responsive.

Relative to the RFP's stipulated minimum criteria, we offer the following summary:

- GZA has practiced engineering in Massachusetts since 1964 and holds on-call consulting agreements with numerous municipal and state-agency clients. Relative to this RFP, our most applicable experience is the On-Call contract GZA held for three years with the City of Springfield for professional engineering services until its recent expiration (City Contract No. 20140969). GZA can provide our substantial list of current on-call contracts upon request.

- GZA's proposed Project Manager / Principal-in-Charge, Mr. Tom Jenkins, P.E., has practiced civil engineering in western Massachusetts for almost 30 years and has worked directly and continuously with various City of Springfield departments for over twenty years. His knowledge of City practices, organization, and infrastructure is vast and diverse. City departments and personnel have come to rely on his experience and understanding of the City's technical affairs as almost an extension of their staff. Springfield's unique and impressive history is one of Mr. Jenkins' personal interests, and his involvement in the maintenance and betterment of City facilities and amenities is a great source of personal pride. Mr. Jenkins is a Registered Professional Engineer in the Commonwealth of Massachusetts and has been with GZA for 24 years.
- GZA's references will attest to the quality of GZA's personnel and performance and the value of the services we provide.
- GZA and our proposed subconsultant team are qualified and licensed to perform the types of professional engineering and ancillary services requested by RFP No. 18-010.
- GZA is headquartered in Norwood, Massachusetts. GZA's prime work location to provide the requested services is our downtown Springfield office at 1350 Main Street—immediately adjacent to City Hall in the MassLive building. Our Springfield location allows us to be on the job immediately, and our knowledge and understanding of City issues results in our professionals being productive without delay. We also have Massachusetts offices in Newburyport, Hingham, and Boston. A complete listing of all 28 GZA offices can be found at http://www.gza.com/office-locations.
- GZA accepts all of the Terms and Conditions as contained in the City's RFP No. 18-010.
- GZA acknowledges receipt of Addendum No. 1 to RFP No. 18-010.

The enclosed sections of this proposal follow the format and sequence specified in the RFQ/P. We have attempted to be as concise as practical to provide an accurate yet thorough understanding of GZA. We would welcome the opportunity to discuss this proposal with the Selection Committee. Should you have any questions, please contact Tom Jenkins at (413) 726-2121. Thank you for this opportunity to express our interest.

Very truly yours,
GZA GEOENVIRONMENTAL, INC.

Thomas E. Jenkins, P.E.
Project Manager / Principal-in-Charge

Guy P. Dalton, LSP
Associate Principal / Springfield Office Manager

Anja Ryan Duffy, P.L.A.
Project Landscape Architect

Paul G. Davis, Ph.D., PWS, CERP, CPSS
Principal / Environmental Scientist

enclosures

TABLE OF CONTENTS

EXECUTIVE SUMMARY

GZA is a multi-disciplinary consulting firm which distinguishes itself by focusing on responsiveness and communications with our clients, perhaps best exemplified by the services that our local office (previously known as Baystate Environmental Consultants, Inc.) has provided to the City of Springfield for so many years.

GZA does not offer the traffic or transportation engineering services considered the traditional mainstays of municipal public works. However, we specialize and excel in several other engineering and environmental disciplines that are critical to the day-to-day operations of the City of Springfield's Department of Parks, Buildings, and Recreation Management and Department of Capital Asset Construction, and other departments.

Coupled with GZA's in-depth knowledge of the City's practices, organization, and infrastructure, our technical strengths will provide cost effective and responsive services to the City.

GZA proposes to provide the City's departments with technical design and consulting services and expertise in the following fields:

- geotechnical engineering services;
- hazardous waste assessment, management, and remediation;
- construction-phase related services;
- flood control systems evaluation, maintenance, and improvement;
- civil engineering;
- landscape architecture;
- stormwater management and permitting;
- solid waste management;
- building condition assessments;
- water resources and environmental engineering;
- wetland and natural resources environmental sciences; and
- permitting.

GZA proposes to provide these services to the City with in-house personnel and resources.

To complement our in-house services and expertise in various assignments with the City of Springfield, GZA proposes to subcontract with:

- Alfred Benesch and Company, Transportation Engineers, to provide specialty services to address traffic-related assessments and designs demanding their transportation skills.
- Heritage Surveys, Inc., Licensed Land Surveyors, to provide land surveying support services. Our office has contracted with Heritage for over 25 years and their personnel and services are well respected in the City.

- RDK Engineers, Inc., Mechanical and Electrical Professional Engineers, to provide expertise related to their fields of interest. RDK has recently performed on several mechanical and electrical related projects as a subconsultant.

Pending particular assignment needs, GZA may also propose other subconsultants to the City for acceptance as warranted and in the best interests of the City. We note that GZA has excellent, active working relationships with all of the City's existing on-call architecture firms, and we would not hesitate to team with any of them on City projects. We have never turned down a City of Springfield assignment based on inability to assemble the appropriate team of subconsultants and vendors.

Relative to the RFP's stipulated minimum criteria, we offer the following summary:

- GZA has practiced engineering in Massachusetts since 1964 and holds on-call consulting agreements with numerous municipal and state-agency clients. Relative to this RFP, our most applicable experience is the On-Call contract GZA held for three years with the City of Springfield for professional engineering services until its re-cent expiration (City Contract No. 20140969). GZA can provide our substantial list of current on-call contracts upon request.
- GZA's proposed Project Manager / Principal-in-Charge, Mr. Tom Jenkins, P.E., has practiced civil engineering in western Massachusetts for almost 30 years and has worked directly and continuously with various City of Springfield departments for over twenty years. His knowledge of City practices, organization, and infrastructure is vast and diverse. City departments and personnel have come to rely on his experience and under-standing of the City's technical affairs as almost an extension of their staff. Springfield's unique and impressive history is one of Mr. Jenkins' personal interests, and his involvement in the maintenance and betterment of City facilities and amenities is a great source of personal pride. Mr. Jenkins is a Registered Professional Engineer in the Commonwealth of Massachusetts and has been with GZA for 24 years.
- GZA's references will attest to the quality of GZA's personnel and performance and the value of the services we provide.
- GZA and our proposed subconsultant team are qualified and licensed to perform the types of professional engineering and ancillary services requested by RFP No. 18-010.
- GZA is headquartered in Norwood, Massachusetts. GZA's prime work location to provide the requested services is our downtown Springfield office at 1350 Main Street—immediately adjacent to City Hall in the MassLive building. Our Springfield location allows us to be on the job immediately, and our knowledge and understanding of City issues results in our professionals being productive without delay. We also have Massachusetts offices in Newburyport, Hingham, and Boston. A complete listing of all 28 GZA offices can be found at http://www.gza.com/office-locations.
- GZA accepts all of the Terms and Conditions as contained in the City's RFP No. 18-010.
- GZA acknowledges receipt of Addendum No. 1 to RFP No. 18-010.

The enclosed subsequent Sections of GZA's proposal follow the format and sequence specified in the RFP and include the required executed forms. We have attempted to be as concise as practical to provide an accurate yet

thorough understanding of GZA. We would welcome the opportunity to discuss this proposal with the Selection Committee.

Should you have any questions, please contact Tom Jenkins at (413) 726-2121.

GZA Team and Organization

As a full-service geotechnical, environmental, and civil engineering firm, GZA has all of the project management, administrative and field-level controls in place to provide geotechnical, environmental, and geo-civil engineering services for the City of Springfield's Department of Capital Asset Construction and Department of Parks, Buildings, and Recreation Management. Specifically:

- GZA was formed in 1964 and has practiced engineering within New England for over 50 years. GZA has had a Springfield-Hartford area office presence since 1979. With our experience in Springfield and the region, we have gained valuable understanding and knowledge of regulatory perspective and local and regional geology. GZA has been able to effectively integrate this knowledge into our project design and consulting services.
- As a business based in the Northeast, GZA has some of the broadest site investigation; environmental, geotechnical and civil engineering; and project management capabilities of any firm in the region. We have completed over 25,000 projects within the Northeast.
- GZA is a financially stable organization with annual revenues of approximately $100 million, ensuring the delivery of the management and technical infrastructure required to manage all aspects of this contract.
- Our growth continues due to the successful integration of technical expertise, client service, and expansion of capabilities that complement our traditional core services. In May, 2007, GZA acquired Baystate Environmental Consultants, Inc. (BEC), a civil engineering and environmental sciences consulting firm located in East Longmeadow. BEC was originally incorporated in 1972 and had a long, continual history of assisting the City of Springfield in a wide variety of consulting services.
- GZA's proposed Project Manager/Principal-in-Charge, Tom Jenkins, P.E., has practiced civil engineering in western Massachusetts for almost 30 years. In 1993, Mr. Jenkins joined BEC and began his relationship with the City of Springfield and has worked directly and continuously with various City of Springfield departments since that time, with BEC for fourteen years and, after a seamless transition, as a GZA principal engineer for the last ten years. His knowledge of City practices, organization, and infrastructure is vast and diverse, and City departments and personnel have come to rely on his experience and understanding of the City's technical affairs, almost as an extension of their staff.
- As a GZA Vice President and Civil Engineering technical practice lead, Mr. Jenkins regularly interfaces with all of the service areas that GZA offers. In recent years, Mr. Jenkins has been instrumental in bringing many of GZA's services to the on-call contracts that GZA has with the City of Springfield. In short, Mr. Jenkins is a key player in GZA's continuing responsiveness to the needs of our clients, matching company personnel and practice areas to the tasks at hand and marshalling response teams to address client requirements.

To complement our in-house services and expertise in various assignments with the City of Springfield, GZA proposes to subcontract with:

- Alfred Benesch and Company, Transportation Engineers, to provide specialty services to address traffic-related assessments and designs demanding their transportation skills.

- Heritage Surveys, Inc., Licensed Land Surveyors, to provide land surveying support services. Our office has contracted with Heritage for over 25 years and their personnel and services are well respected in the City.
- RDK Engineers, Inc., Mechanical and Electrical Professional Engineers, to provide expertise related to their fields of interest. RDK has recently performed on several mechanical and electrical related projects as a subconsultant.

Pending particular assignment needs, GZA may also propose other subconsultants to the City for acceptance as warranted and in the best interests of the City. We note that GZA has excellent, active working relationships with all of the City's existing on-call architecture firms, and we would not hesitate to team with any of them on City projects. We have never turned down a City of Springfield assignment based on inability to assemble the appropriate team of subconsultants and vendors.

An organizational chart identifying GZA's Project Manager, the services we will provide and the individuals who will be providing those services, and GZA's proposed subconsultants follows.

GZA TEAM ORGANIZATION

City of Springfield

Subconsultants:

Alfred Benesch & Co.

Heritage Surveys, Inc.

RDK Engineers

&

Other approved ancillary subconsultants or vendors as required or requested

Project Manager / Principal-in-Charge

Thomas E. Jenkins, P.E.

Vice President / Senior Engineer

Quality Assurance/Control

Guy P. Dalton, LSP

Assoc. Principal / Springfield Office Manager

Natural Resources / Lakes	Geotechnical / Structural	Environmental – Hazardous Materials, Brownfields	Dams and Flood Control Systems	Landscape Architecture	Civil Engineering / Stormwater
Paul G. Davis, Ph.D. Steven D. Riberdy, MS	Nathaniel Russell, P.E. Thomas Billups, P.E.	Guy Dalton, P.E., LSP Gordon Brookman, P.E., LSP	Nathaniel Y. Arai, P.E. Matt A. Taylor, P.E.	Anja Ryan Duffy, R.L.A. John C. Walker, R.L.A.	Jennifer R.M. Burke, P.E. Steven D'Ambrosio, P.E.

GZA GeoEnvironmental, Inc.

- Green Technologies & Sustainability
- Building Services
- Litigation Support Services
- Staff of over 600 employees
- Technical Software
- Construction-Phase Services
- Air Quality Services
- Regulatory Compliance
- Occupational Health & Safety

PROPOSAL FOR

ON-CALL ENGINEERING SERVICES

FOR THE

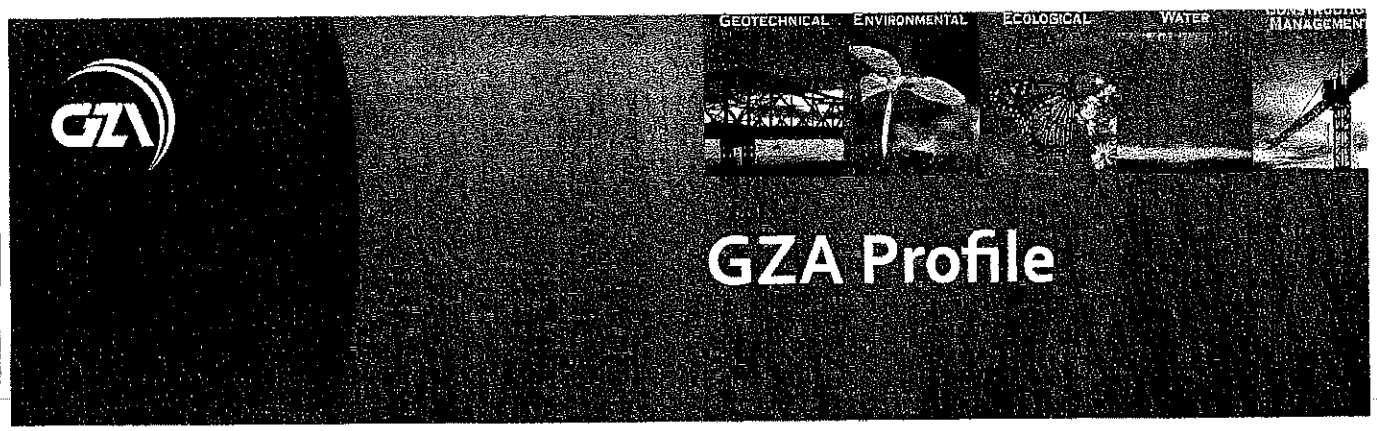
CITY OF SPRINGFIELD

RFP NO. 18-010

BACKGROUND OF FIRM

FIRM NAME:	GZA GEOENVIRONMENTAL, INC.
YEAR ESTABLISHED:	1964
FORMER FIRM NAME:	In 2007, the Springfield-area firm Baystate Environmental Consultants, Inc. (BEC) was purchased by GZA. Most of the current personnel in GZA's local Springfield office were originally BEC employees. We point this out because of BEC's excellent history and reputation in the City of Springfield.
BUSINESS ADDRESS:	1350 MAIN STREET – SUITE 1400 SPRINGFIELD, MA 01103
TELEPHONE NO:	(413) 726-2100
CONTACT:	THOMAS E. JENKINS, P.E.
SERVICES:	GEOTECHNICAL AND CIVIL ENGINEERING LANDSCAPE ARCHITECTURE ENVIRONMENTAL CONSULTING SOLID WASTE MANAGEMENT CONSTRUCTION ADMINISTRATION / INSPECTION / MANAGEMENT
PRINCIPALS:	GZA GeoEnvironmental is a privately-held corporation with all voting stock owned by 77 Associate Principals, Principals, and Senior Principals within the firm. A listing of all stockholders is available upon request.

Following is a generalized Statement of Qualifications for GZA, Alfred Benesch and Company, Heritage Surveys, Inc., and RDK Engineers, along with details of applicable service areas.



GZA Profile

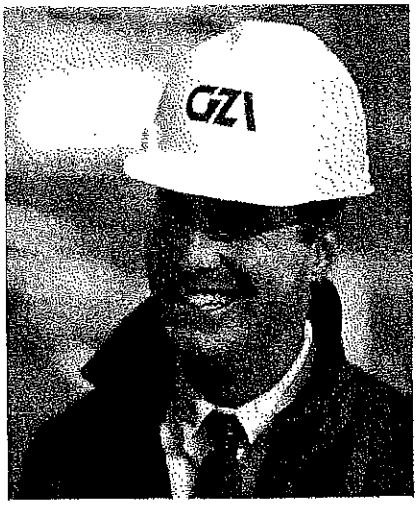
Founded in 1964 as Goldberg-Zoino & Associates, Inc., a soils and foundations specialty consultant, GZA GeoEnvironmental, Inc. (GZA) has grown into a full-service company providing its clients with highly diversified technical services supporting our core practice areas. GZA employs over 600 engineers, scientists, and technical support staff in 27 offices in the U.S. (primary operations in Northeast, Mid-Atlantic, Mid-West, and Appalachian regions) and is currently ranked #122 in the ENR's 2017 Top 500 Design Firms list and #96 in ENR's annual list of the top 200 environmental firms. GZA is an employee-owned firm with gross revenues exceeding $100 million annually.

With a legacy of experience in geotechnical and environmental engineering, GZA has expanded its core services to include water, ecology, and construction management services. These five branches of service excellence are born from the same corporate tree. One Company: Five core services supporting 10 client sectors in numerous geographic locales throughout the United States. As a result, GZA leverages our in-house capabilities including environmental engineering, permitting, structural engineering, public health, project management, environmental compliance auditing, industrial hygiene, pollution prevention, and air quality services to develop an approach for each project that maximizes value to our clients.

Proactive communication is our company commitment. GZA is Proactive by Design®. We plan and perform our work better through taking complete responsibility for understanding your goals, needs, and project constraints. We develop a project-specific communications plan to meet your need for face-to-face, phone, email and written communications about your project's progress. You are kept up to date on work status, often before you think to ask. You are advised and consulted on your most important project and risk options before work begins. We take a forward thinking "ownership" perspective on your project's critical success factors in partnering with you as a trusted advisor on your team.

Because GZA experts are trained across disciplines, clients benefit from the knowledge and experience of all of our staff, and resources are in-house and available for every project at any time. With the ability to manage unpredictability, remain nimble, and mobilize quickly, GZA responds to client inquiries with urgency, sensitivity, knowledge and value, while remaining mindful of project costs and schedule.

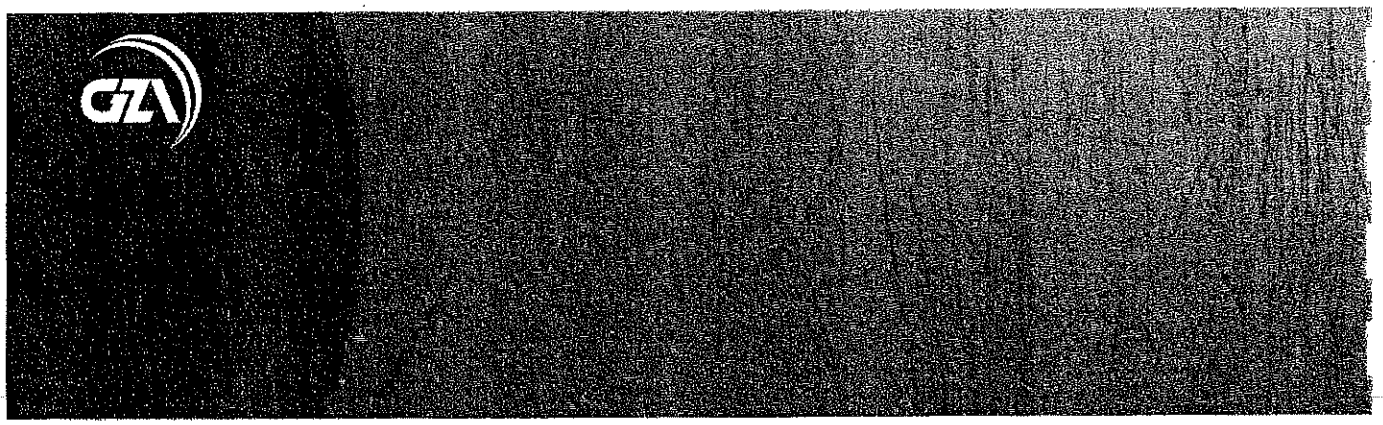
Excelling as a multi-disciplinary, multi-office firm of proactive, bright, and dedicated people, we provide value to our clients and our profession. We are Proactive by Design. We are One Company. **We are GZA.**



With a staff of interrelated professionals dedicated to providing high-level expertise on complex projects above, below and at ground-level, GZA's experts provide seamless integration across practice areas, client type, and location. As an employee-owned, private company, GZA's staff is motivated to propel the firm forward, seeking integrated, complex, and interesting projects that underscore a commitment to client satisfaction, environmental stewardship and best practices in science, engineering and construction.

GZA's Core Services

- Geotechnical
- Environmental
- Ecological
- Water
- Construction Management



ECHNICAL PRACTICE LEADS

Air Quality
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Building Services
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Civil Engineering
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Construction Mgmt.
Steve Raymond
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Dams/Water Resources
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davidm.leone@gza.com

EH&S/Regulatory Compliance
Ronald Breton, P.E.
ronald.breton@gza.com

Environmental Remediation
John Spirito
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Environmental Site Investigation
Michael Shaw
michael.shaw@gza.com

Geotechnical
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david.carchedi@gza.com

Natural Resources/Permitting
Paul Davis, Ph.D., PWS, CPSS
paul.davis@gza.com

Solid Waste
Edward Summerly, P.G.
edward.summerly@gza.com

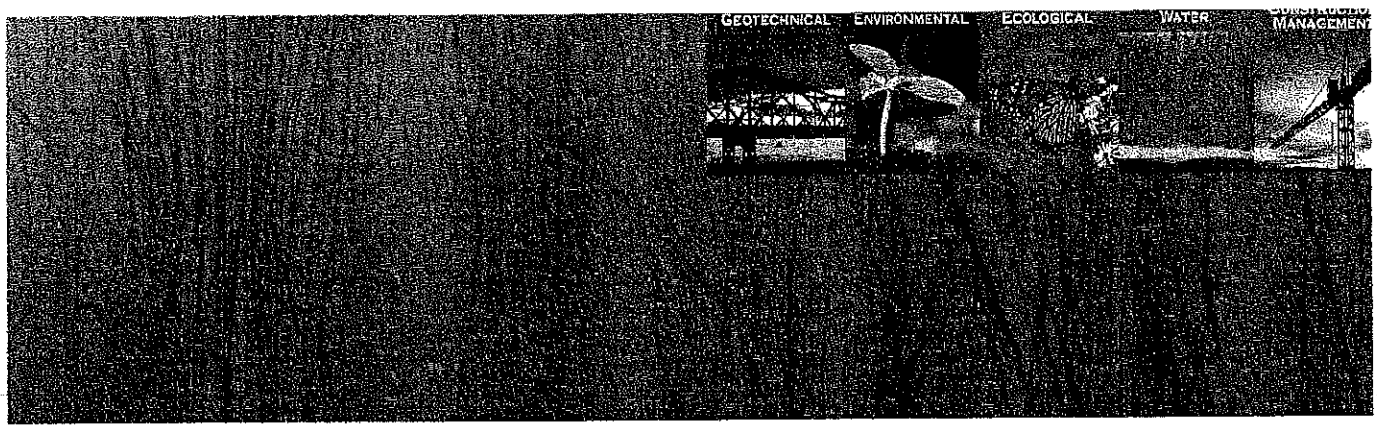
Technical Graphics
Deborah Landi
deborah.landi@gza.com

Waterfront/Marine
Dino Fiscaletti, P.E.
dino.fiscaletti@gza.com

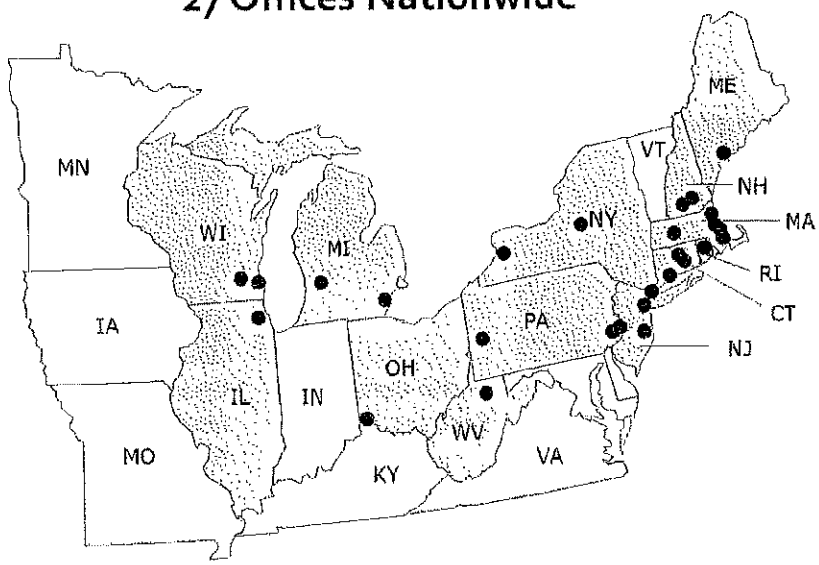
HEALTH & SAFETY AT GZA

We have provided innovative and sustainable engineering solutions to our clients for more than 50 years, and we could not do this without our people. They are our most important resource, and ensuring their health and safety is a GZA Core Value we demonstrate through our Environmental, Health, and Safety (EHS) programs and our culture.

Our company prides itself on being "Proactive by Design", and this empowers our employees to do the right thing and know they are supported when they do. It allows us to learn big lessons from small things, and systematizes continuous improvement of our approach. Our approach is grounded on the EHS Policy statement and annually-published EHS goals. These goals demonstrate our commitment to health and safety.



27 Offices Nationwide



CT: Glastonbury, Manchester, Trumbull | **RI:** Providence

NH: Keene, Manchester | **ME:** Portland

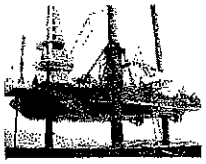
MA: Norwood, Boston, Springfield, Hingham, Amesbury

NY: New York City, Buffalo, Syracuse | **NJ:** Fairfield, Hammonton

PA: Philadelphia, Pittsburgh, Lansdale | **OH:** Cincinnati | **IL:** Chicago

MI: Detroit, Grand Rapids | **WI:** Milwaukee, Waukesha

WV: Bridgeport



Team (Office) Leaders

Stephan Roy (Glastonbury, CT) 860-858-3113

Kathleen Cyr, P.E., P.G., LEP (Trumbull, CT) 203-256-8016

Kimberly Wills (Manchester, CT) 860-858-3153

Russell Morgan, P.E. (Providence, RI) 401-427-2708

James Errico, P.E. (Bedford, NH) 603-232-8750

Bradford Roberts, P.E. (Keene, NH) 603-283-0300

Christopher Snow, P.E. (Portland, ME) 207-358-5118

Chad Cox, P.E. (Norwood, MA) 781-278-5787

Bruce Fairless, P.E. (Boston, MA) 617-963-1002

Guy Dalton, P.E., LSP, LEP (Springfield, MA) 413-726-2104

Anders Bjarngard, P.E. (Amesbury/Hingham, MA) 978-278-4802

Cassandra Wetzel, P.E. (New York, NY) 646-929-8906

Bart Klettke, P.E. (Buffalo, NY) 716-844-7035

David Winslow, Ph.D., P.G. (Fairfield, NJ) 973-774-3307

John Oberer (Philadelphia/Lansdale, PA/Hammonton, NJ) 215-591-3800 x3612

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Benjamin Haith, P.G. (Syracuse, NY) 315-800-1809

James Drought, PH (Milwaukee/Waukesha, WI) 414-831-2540

Jennifer Krueger, P.G. (Cincinnati, OH) 513-782-0012

Margaret Panatera, P.E. (Chicago, IL) 630-684-4422

Anthony Percha (Detroit/Grand Rapids, MI) 734-779-2437

For More Information, please visit www.gza.com

*We are **Proactive by Design**. We are **One Company**. We are **GZA**.*

Proactive by Design

GZA Profile

Proactive by Design. Our Company Commitment. Excelling as a multi-disciplinary, multi-office firm of proactive, bright, and dedicated people, GZA supports our clients and our profession through demonstrated expertise in each of our five core service areas. Woven together, these services integrate with each of our client-focused markets, providing unparalleled value from a single company. **We are Proactive by Design. We are One Company. We are GZA.**

Geotechnical Services

- Subsurface Investigations
- Deep and Shallow Foundation Solutions
- Rock Slope Characterization, Stability Assessment, Rock Fall Mitigation
- Soil Slope Analysis and Stabilization Design
- Tunneling and Underground Construction
- Earth Support Design and Dewatering
- Seismic Evaluation
- Geothermal System Design
- Landfill Design
- Instrumentation and Deep Foundation Testing

Environmental Services

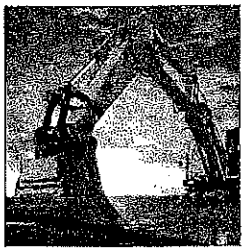
- Environmental Site Assessment and Investigation
- Site Remediation
- Environmental Health and Safety Regulatory Compliance
- Air Quality
- Hazardous Materials Management / Demolition
- Sustainability Advisory Services

Ecological Services

- Wetland Delineation, Assessment and Design
- Biodiversity, Habitat and Rare Species Assessment
- Aquatic Toxicity Testing
- Environmental Impact Studies
- Natural Resource Permitting
- Erosion and Sedimentation Control Design and Compliance Monitoring
- Ecological Restoration Design
- Invasive Species Management
- Water Quality Assessment and Planning
- Marine and Freshwater Habitat Analysis

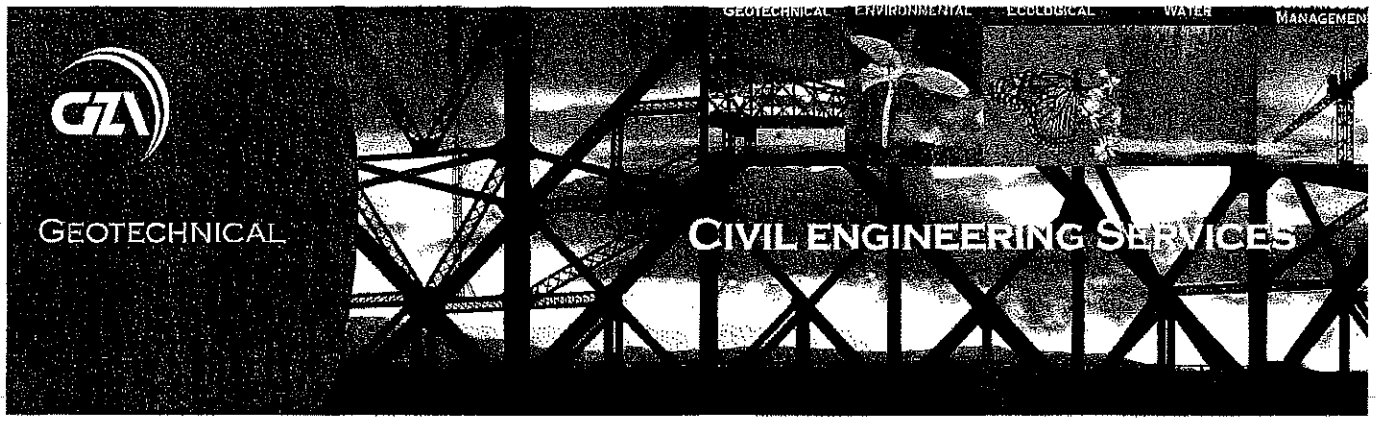
Water Consulting Services

- Marine and Waterfront Structures
- Dams and Levees
- Water Resources
- Climate Change and Hazard Planning



Construction Management Services

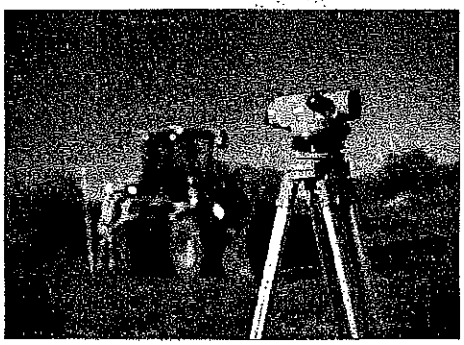
- Project Management
- Program Management
- Demolition and Decommissioning
- High Risk Remediation/ Specialty Clean Construction
- Construction-Related Building Services
- Asbestos, Lead, PCB's, and Mold Abatement



GZA is proactive by design. GZA has developed and delivered comprehensive civil engineering services to both public and private sector clients for over five decades. We routinely assist our clients with diverse assignments ranging from small residential subdivisions to large multi-unit housing projects, and a variety of commercial, institutional, transportation and water resources projects.

We are able to provide our clients with virtually all the engineering and environmental services necessary for successful site planning and land development. Our staff is experienced in preliminary planning and analysis, alternative design development, definitive roadway design and geometric layout, site utilities design, construction cost estimating, project financial analyses, environmental permitting, and construction monitoring. From the initial site planning and layout through the completion of construction, our staff integrates the environmental opportunities and constraints of a given site with our client's needs in order to optimize the project goals.

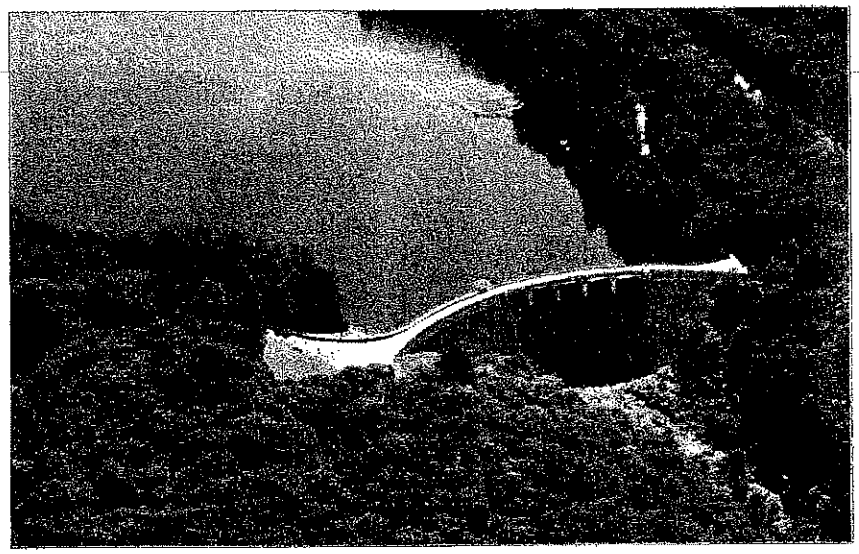
In recent years and especially with the Phase II Rule for MS4s, the design of storm water management facilities has become an increasingly critical factor in obtaining environmental and engineering regulatory approvals for land development projects. To this end, GZA has become proficient in the engineering analysis and design of stormwater BMPs necessary to achieve compliance with the NPDES Phase II rule and other applicable stormwater regulations on a local scale. This work is particularly challenging in urbanized communities where land values are high and where alternatives for feasible and prudent stormwater BMPs become limited. Our staff specializes in the design of innovative, state-of-the-art approaches to stormwater management using a wide variety of computer modeling as well as time-tested empirical design techniques.

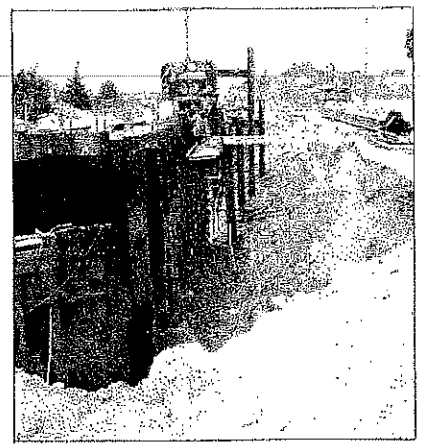


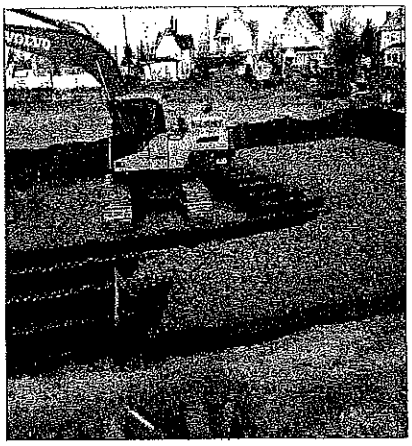
SERVICES SPOTLIGHT

- Site Master Planning
- Engineering Constraints Analyses
- Roadway Design, Geometrics, & Structures
- Institutional Site Design Development
- Culvert Analysis and Design
- Stormwater BMP Design & Permitting
- NPDES Phase II Compliance
- Residential / Commercial / Industrial Subdivision Design & Permitting
- Brownfield's Redevelopment / Design & Permitting
- Water & Sewer Utilities
- Lake Pond & Park Restoration
- Construction Administration & Observation
- Value Engineering
- Professional Witness Testimony

CIVIL ENGINEERING SERVICES



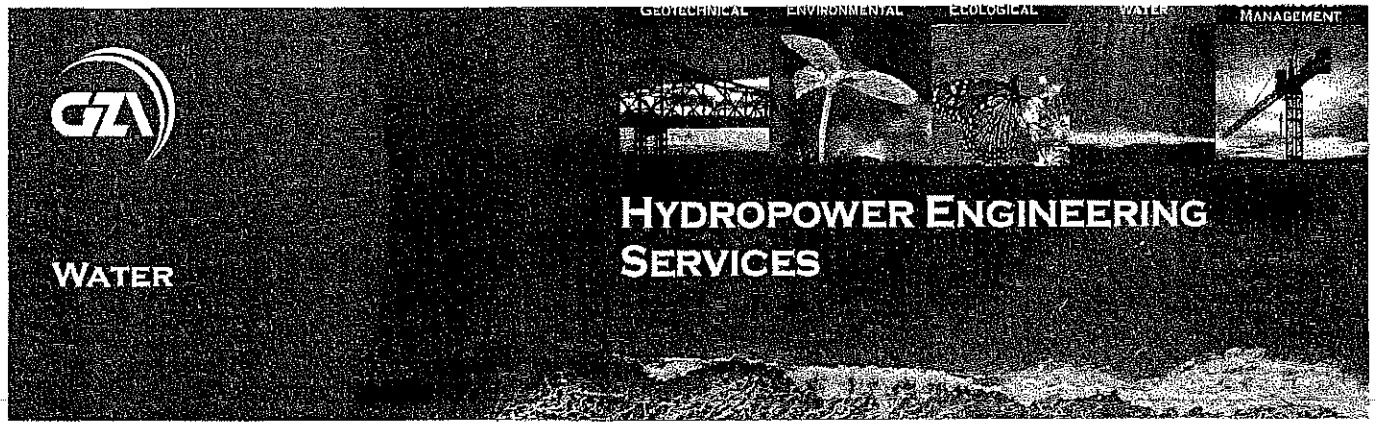




GZA has designed and carried out full-scale water resource restoration programs, principally in the areas of mechanical and hydraulic dredging. Our reputation and growth began with the national prominence that firm members have achieved for their innovative work on dredged material analyses, turbidity control, containment, treatment, mitigation of potential environmental impacts, and ultimate sediment reuse or disposal options.

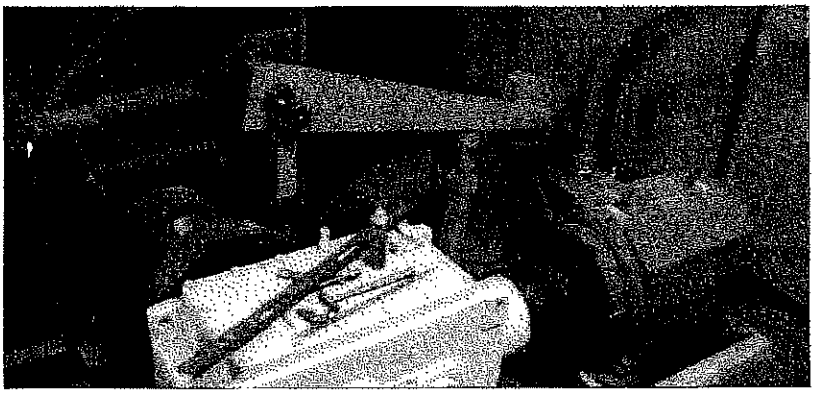
In addition, we have been active throughout our service areas providing a wide range of engineering services (civil, geotechnical, environmental, hydraulic and hydrological, and structural) on major public works projects including highways and bridges, railroads, airports, public parks, waterways, and dams.

Our engineering staff works closely with our environmental assessment and ecological groups, providing an in-house team which ensures that our engineering designs are responsive to site environmental and regulatory realities. We strive to deliver an environmentally sensitive, cost effective design which meets our client's needs and is accepted by regulatory authorities in a timely manner.



WATER

HYDROPOWER ENGINEERING SERVICES



GZA is proactive by design. GZA has been providing services to the hydropower industry for decades. The hydropower industry is a multi-disciplinary sector, and GZA is a multi-disciplinary firm. Owners of hydroelectric dams have long counted on GZA's extensive experience in the fields of civil, hydrologic, and dam engineering to assist them in constructing, repairing, and maintaining their structures. GZA now provides a wider range services, including licensing, permitting, environmental studies, and design of new or rehabilitated small hydroelectric facilities.

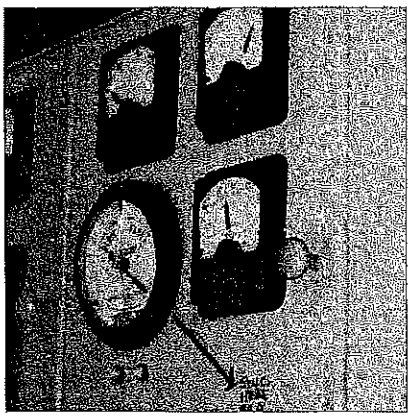
GZA understands that licensing and permitting can often be the biggest challenge to successfully bringing a hydroelectric project on-line. GZA can guide a client through the Federal Energy Regulatory Commission (FERC) licensing process by providing technical, environmental, and filing preparation services all the way from the Preliminary Permit application through the License or Exemption process. State and local permits are important too, and GZA's experience in dealing with multi-agency permitting situations is invaluable for such projects.

GZA has provided engineering services at projects from 900 MW to 40 kW in size. We understand that each project has a unique set of challenges and opportunities. GZA has key knowledge about the particular issues involved with developing hydropower at existing dams, including fisheries issues and certification by LIHI. We have successfully helped numerous clients obtain financial assistance for investigation, design, and construction of efficiency improvements and new projects. We are prepared to work with clients on a wide range of project sites and project scales. Our goal is to help bring clean, renewable, cost-effective power on-line in a way that benefits the owner, the environment, and the nation.

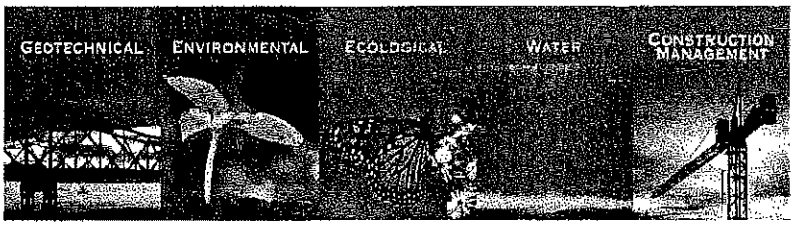
SERVICES SPOTLIGHT

Key Capabilities

- Hydropower Studies
  - o Preliminary Resource Assessment
  - o Feasibility Study
  - o Hydrology Analysis
- Hydropower Project Design
  - o Turbine Selection
  - o Civil Works
  - o Dam, Outlet, Spillway Structures
  - o Construction-Phase Services
- Dam Safety Engineering
- Environmental Studies
- FERC Compliance
  - o Preliminary Permits
  - o Licensing/Relicensing
  - o PFMA/Part 12 Inspections
  - o EAPs



Proactive by Design

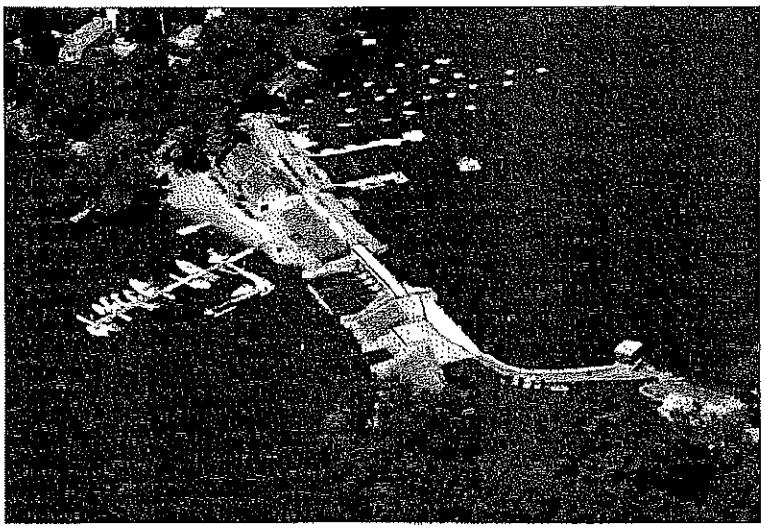


Statement of Qualifications

DAMS and LEVEE SERVICES

Dams and Levee Services

- Dam Safety Inspections
- Condition Investigation and Assessment
- Geotechnical Engineering
- Structural Engineering
- Hydrology and Hydraulics
- Instrumentation, Monitoring, Testing
- Hydropower Services
- Emergency Action Planning
- Repair and Rehabilitation Design
- Permitting
- Construction Support



GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue | Norwood, MA 02062
Telephone Number 781.278.3700

26 Offices Nationwide
www.gza.com

Statement of Qualifications
DAMS SERVICES

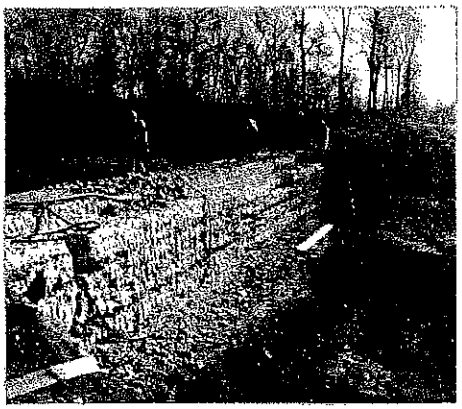
GZA is proactive by design. GZA maintains a strong service base and expertise in our original specialty of geotechnical engineering. Over the years, our engineering capacity has broadened to general civil engineering services with an emphasis in environmental, geo-structural engineering and site civil applications, such as solid waste engineering, stormwater management, site design, and dam engineering. GZA has over 30 qualified engineers in our New England offices with relevant dam safety engineering expertise.

Through integration of our dam safety, geotechnical, environmental, and civil engineering expertise, GZA offers a broad range of technical expertise to achieve cost-effective and technically appropriate solutions to our clients' problems. We have taken the additional step to tailor our integrated services around the specific needs of various client groups such as water suppliers, retailers, site developers, the power industry, government agencies, industrial and commercial land owners, and contractors, to name a few. This approach allows us to provide the technical expertise, innovation, sensitivity to client needs, and responsiveness to the unique permitting, engineering, or construction issues associated with each client group. **Choose GZA.**

Proactive By Design

Proactive communication is our company commitment. GZA is Proactive By Design – We plan and perform our work better through taking complete responsibility for understanding your goals, needs, and project constraints. We develop a project-specific communications plan to meet your need for face-to-face, phone, email and written communications about your project's progress. You are kept up to date on work status, often before you think to ask. You are advised and consulted on your most important project and risk options before work begins. We take a forward thinking "ownership" perspective on your project's critical success factors in collaborating with you as a trusted advisor on your team.

We leverage and share our company's diverse technical experience, best practices, and business knowledge via information technology systems, professional practice training programs, and GZA's annual in-house technical conference. All of our employees are connected and accessible through technology, allowing efficient transfer of knowledge and expertise to our project team members and our clients.



Recent concrete repairs to primary spillway at MDC West Hartford Reservoir Dam #2

GZA's project management team, project staff and technical specialists are experienced in collaborating in large multiple-stakeholder project teams on: dam engineering, environmental consulting, Licensed Environmental Professional services, foundation engineering, seismic analysis, site engineering, planning and development, tunneling, ground improvement engineering, geology, lateral earth support systems, slope stability, rock engineering, excavation analysis, and construction observation and testing. GZA has expertise in the design of varied foundation types, including piles, footings, caissons, compacted fill, and mats. In addition, GZA is recognized nationally for expertise in tunnel design, underpinning and support of braced excavations.

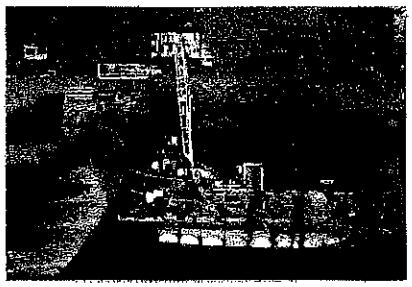
GZA offers a multi-disciplinary technical approach that provides our clients with cost-effective and technically appropriate solutions while considering sustainability in our services and designs. Technical expertise, innovation, sensitivity to client needs, and proactivity are the "trademarks" of GZA. This practical solutions-oriented framework has helped GZA set a 50-year record of accomplishment for attention to detail and consistent financial performance in our industry through growing and declining economic and real estate market cycles.

GZA'S DAM ENGINEERING QUALIFICATIONS AND TECHNICAL CAPABILITIES

GZA has been involved in site inspections, investigations, design, construction, and seismic evaluation of more than 1,000 dams and water control structure throughout the United States. GZA's experience in dam engineering consulting extends over 45 years. The projects include small dams, large, high hazard dams, water supply structures, flood control structures, dikes, and levees. GZA's dam experience includes performing Phase I Level (as per U.S. Army Corps of Engineers) dam safety inspections, Phase II Engineering investigations, preliminary and final designs for rehabilitation of existing earth embankment, concrete, and stone masonry gravity dams. We typically also provide permitting and construction-phase services on these projects.

General Description of Dam Engineering Services

The client may require the myriad of technical services normally associated with dam safety engineering. These services usually include:



GZA's Phase II subsurface explorations at dams often occur in environmentally sensitive areas with difficult access conditions

- Visual Dam Inspections;
- Detailed field inspections including underwater diving and remote operating vehicle (ROV) observations;
- Subsurface explorations; in-situ permeability and packer testing; geophysical testing and installation of instrumentation such as observation wells and piezometers;
- Seepage and slope stability analyses for earth embankment and gravity stability analyses for concrete dams and spillways;
- Structural engineering assessment and design including repair of concrete and masonry gravity structures;
- Hydrologic and hydraulic assessment of design floods, including PMF, and analysis of spillway capacity and outlet structures;
- Evaluation of gates and valves of outlet works, including replacement/rehabilitation of sluice gates, gatehouses, piping and appurtenances;
- Executing and facilitating Potential Failure Mode Analyses (PFMA's);
- Development of final construction drawings and technical specifications for dam rehabilitation;
- Environmental permitting support;
- Engineering services during construction including resident inspection;
- Emergency Action Plan (EAP) preparation and update, including dam failure analysis, inundation studies and Inundation Mapping preparation;
- Operation and maintenance (O&M) Plans;
- Training dam owners on performing self-inspections;
- Evaluation and retro-fit upgrades to existing and proposed hydroelectric facilities;
- Capital planning and dam repair prioritization for dam portfolio owners; and
- Peer review of analyses, reports, and designs completed by others.

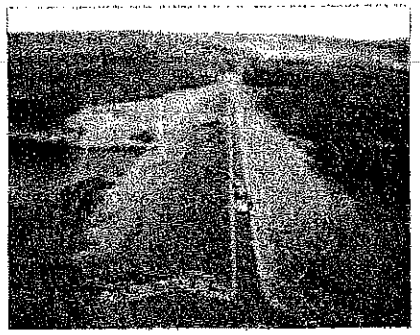
Over the past five decades, GZA has a proven track record of routinely providing these services for our numerous dam owner clients, especially those in the public sector, responsible for water supply to towns, cities and regional areas. Typically, our clients will rely upon our services and professional opinions when executing their capital improvement planning process for their dam and reservoir infrastructure.

The following paragraphs provide a brief overview of our in-house technical capabilities as they apply to our practice of dam safety engineering.

Geotechnical Engineering

GZA's geotechnical engineers initially review existing data and then develop subsurface exploration programs to obtain necessary data to evaluate seepage and slope stability of embankment and gravity dams. The historic drawings (if available) are integrated with subsurface data to develop soil and groundwater models of the dam.

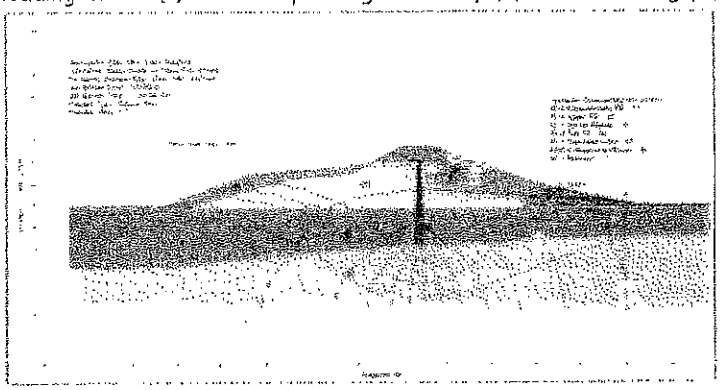
Typically, we use the GeoStudio computer software to evaluate seepage considerations and slope stability. The input parameters are based on estimates of each dam's as-built dam geometry and soil strength parameters correlated from data obtained from subsurface exploration programs. The SEEP/W simulation is used to estimate seepage exit gradients, to evaluate the potential for a piping failure mode. The pore water pressure values, obtained from the seepage (SEEP/W) analysis, are incorporated in the SLOPE/W simulation to estimate the factor of safety against slope instability. The SLOPE/W runs are used to calculate the factors of safety against slope failure for the dam embankment under normal, unusual, and extreme conditions, including design floods, earthquake, and sudden drawdown conditions.



GZA performed instrumentation installation on the Army Corps of Engineer's Everett Lake Dam in Contoocook, NH

The estimated factors of safety are compared against the minimum values established by either State Dam Safety Regulations or accepted dam engineering guidelines from the U.S. Army Corps of Engineers, Bureau of Reclamation, or the Federal Energy Regulatory Commission. The factors of safety against sliding and overturning for gravity dams and spillways are done using the gravity method of analysis. Typically, our analyses begin as 2-D analyses. However, for complex geometries, we will incorporate 3-D models.

GZA also has the proven capability to assess concrete gravity dams by reviewing as-built information, performing subsurface investigations and developing cross-sections through the dam and performing two-dimensional (2-D) stability analyses. The analyses allow us to estimate the factors of safety against sliding along the dam's base and foundation interface or other critical planes through the dam above the foundation, as appropriate. The calculations are usually performed for the four loading cases: (a) normal operating condition; (b) flood discharge; (c) ice loading; and (d) normal operating with earthquake. Our concrete analysis examines overturning resistance based on resultant force location. When the level of structural complexity warrant, we are equipped to refine our investigation by conducting analytical and numerical three dimensional (3-D) stability analyses, which evaluate the hydrostatic and dynamic load transfer and available shear capacity between adjacent monolithic sections of the concrete dam.



Flow net generated for an embankment dam using SEEP/W computer software

Structural Engineering

GZA's structural engineering staff have significant experience with water control structures including spillways, training walls, and abutments, and appurtenant structures such as bridges. In addition, our experience includes nondestructive testing of concrete and steel structures using methods such as delamination sounding, pachometer surveys for rebar cover, chloride content analysis, petrographic study, compression strength testing, and ultrasonic testing; structural analysis for existing structures, including complex three-dimensional analysis design of concrete repairs for non-structural cracking, structural cracking, spalling, scaling, and abrasion-erosion, along with development of standard details for these repairs for state agencies; rehabilitation design for concrete and steel structures; design of structural modifications to improve strength, functionality, and/or durability; and design of new and replacement concrete dams, wingwalls, drainage structures, culverts, bridges, and other structures.

GZA engineers designed and inspected concrete repairs to the overflow sections of Lake Ladore Dam in Waymart, PA

Hydrology/Hydraulics

Hydraulic and hydrologic engineering are the foundation of GZA's water resources expertise. Our team personnel have the training and hands-on experience to plan and conduct riverine and coastal analysis as well as design of hydraulic structures and flood mitigation. Much of this expertise supports our dam and levee assessment and design engineering practices. Our rainfall-runoff modeling capabilities typically use Corps' HEC-HMS computer program, where we apply proven hydrologic techniques including the Snyder, Clark, and Dimensionless Unit Hydrograph Methods. Inflow Design Flood hydrographs are developed through rigorous calibration and verification efforts for both gaged and ungaged watersheds. Our water resource engineers utilize hydrologic results to compute hydraulic profiles in riverine and other open channel as well as pipe flow configurations to assess and design various water conveyance structures, including:

- Spillway weirs & discharge channels;
- Energy dissipaters & stilling basins;
- Low level outlets, release chambers; and gates & valves;
- Hydropower penstocks & tailraces; and
- Pump stations and stormwater drainage systems.

Construction of the new spillway at Wachusett Dam in Clinton, MA

Much of our hydraulic engineering evaluations and designs utilize proven and verifiable Corps software products including HEC-RAS and HEC-GeoRAS. Our projects have included river modeling of major waterways such as the Mississippi River, Arkansas River, Hudson River, and Connecticut River. In certain instances, GZA uses FLO-2D when complex site conditions involve two dimensional flow patterns and momentum fluxes. GZA has training in and experience with the 2-D capabilities in HEC-RAS 5.0; however because the model is in beta we have not used it in our project work. GZA also has training and experience in conducting dam breach simulations (using both one and two-dimensional model approaches) and developing inundation maps as part of our Emergency Action Planning services.

GZA is experienced in the calculation of the Probable Maximum Flood (PMF) and the Probable Maximum Precipitation (PMP) using methods from HMR-51/52. Working closely with our meteorological subconsultants, GZA has performed PMF studies derived from site-specific PMP calculations.

In most cases, requirements for embankment overtopping protection and issues related to estimated minimum freeboard are assessed by our engineers by estimating wind setup and wave run-up using published Corps references including EM-1110-2-1420 (Hydrologic Engineering Requirements for Reservoirs) and EM 1110-2-1414 (Water Levels and Wave Heights for Coastal Engineering Design) and the US Bureau of Reclamation's Design Standards (DS No. 13, Chpt 6, Sept 2012).

Instrumentation, Monitoring, and Testing

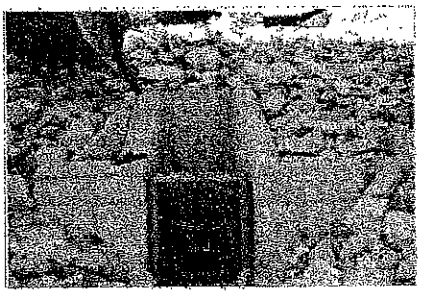
Since 1968, GZA has provided instrumentation services on over 500 major civil engineering and mining projects. This "hands on" experience is supported by access to the resources of the entire GZA organization, including the services of over 300 professional engineers and scientists practicing geotechnical engineering, rock mechanics, hydrogeology, chemistry, toxicology, geology, hydrology, and chemical engineering. We have designed and installed computer-based data acquisition and data reduction systems for use at dams, mines, tunnels, deep excavations and deep foundations. Our experience with foundation instrumentation also includes static and dynamic measurements on soils and structures. Our underground activities include in situ soil and rock testing and the design and installation of stability monitoring systems. We have extensively measured soil and rock deformations using inclinometers for measurement of horizontal movements and tape extensometers for measurement of deformations between fixed points in tunnels or open cuts.

GZA inspection of relief wells in the Nepaug Dam gallery

Gate and Valve Evaluation and Design

Many of our dam projects require designing hydraulic improvements for existing dams to safely pass the specified design flood and/or to provide flexibility in normal and flood pool manipulations. Our team brings together the expertise via the multi-disciplines of hydrologic/hydraulic, geotechnical and structural engineering to conduct alternatives analyses leading to final design drawings and specification for gate and valve improvements to spillways and associated outlet works.

GZA's staff includes Mr. Richard Scott who joined GZA in 2012 after a 30-year career with the Rodney Hunt Company, where he progressed to the position of Engineering Manager. During his time at the Rodney Hunt Company, Mr. Scott was engaged in all aspects of product design, performance and manufacture of Rodney Hunt gates and valves for numerous dam projects across the United States. The addition of Mr. Scott to the GZA team allows us to provide a tremendous value to our clients when evaluating options to address their gates and valves needs on their existing dams.

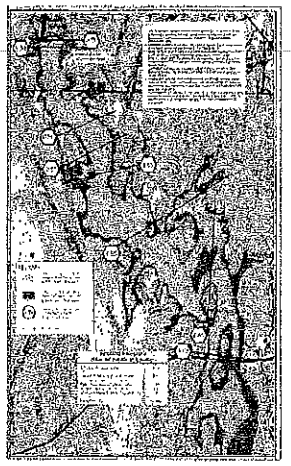


GZA designed this retrofit consisting of an angled slide gate and operator at the MDC Hartford's Reservoir No. 2 in West Hartford, CT

Emergency Action Plans & Dam Safety Training

Associated with most dam safety inspections are formal, written Emergency Action Plans (EAPs), which are usually required for Significant and High Hazard dams. GZA has prepared over 100 written EAPs for dams over the past 20 years. EAPs are necessary to outline an organized response to emergency situations associated with a sudden, rapid, and uncontrolled release of water from a dam. The major components of an EAP include detailed procedures for emergency identification, repair, notification, and evacuation.

Key elements of EAP development include dam breach simulation and floodwave routing in order to produce Inundation Maps. Ultimately, the EAP helps owners in maintaining a safe structure and assists public safety. Our services in this area have including developing and conducting orientation meetings and communication drills that focus awareness and tests the readiness of the plan. Often times our work includes specialized training in instrumentation reading and basics of routine dam inspection to the dam operators and their related staff.



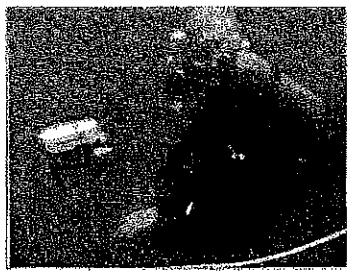
GZA uses its hydrologic and hydraulic expertise to conduct dam breach simulations and inundation mapping.

Diving and ROV Services

GZA's diving services have provided waterfront-underwater inspection services to both private and public clients including; state and federal agencies, municipal governments, public and quasi-public authorities, marine terminals, marinas and boatyards. GZA has provided these SCUBA diving services for over 25 years on over 1,600 waterfront projects throughout New England and the East Coast.

GZA's experienced in-house Engineers/Divers have specific experience with New England waterfront structures with design insight of the structural significance of the damage observed. Investigation services include visual and tactile inspection, scour evaluation, underwater photographs and videos, UT (ultrasonic thickness) tests, timber coring and materials testing. GZA has provided Engineer/Divers on all underwater inspection projects utilizing in-house staff and will specialized sub-consultants to assist on particular project tasks as necessary.

GZA Engineer/Divers perform the underwater inspections in accordance with OSHA Subpart T- Commercial Diving directives and the American Society of Civil Engineers (ASCE), Underwater Investigations, Standard Practice Manual, No. 101. For most inspections, VA will use Self Contained Underwater Breathing Apparatus (SCUBA) with two-way, diver internal communication system to describe conditions observed to the topside diver/tender.



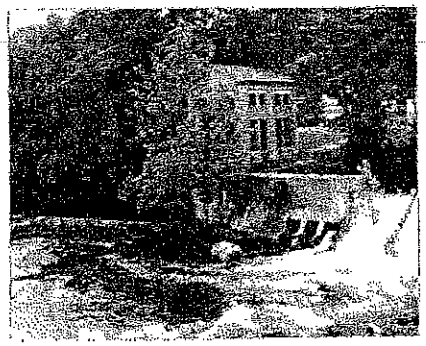
Typical inspection procedures include documentation of typical and abnormal conditions of the various components of the substructure by field notes, sketches, photography, videography and non-destructive testing. In the event the structures are inaccessible by divers, or to supplement the diver's inspections, GZA will utilize a VideoRay Pro XEGTO, submersible Remote Operated Vehicle (ROV) to perform the necessary inspection. The inspection results will be in a standardized format suitable for use in database management system.

Environmental Permitting Support

Most of our dam engineering design projects require a significant level of environmental scrutiny prior to obtaining approval. The nature of most major dam improvements and repairs requires some unavoidable alteration of vegetated wetlands and other sensitive resource areas due to the need to bolster a dam's footprint and/or to temporarily control water during construction. Our team of environmental engineers and scientists has the technical training and practical experience to assess wetland, wildlife habitat, and other applicable ecological impacts and to incorporate mitigation measures within our dam improvement designs that fulfill Federal, state and local regulatory requirements.

Hydropower Services

GZA has been providing services to the hydropower industry for over 20 years. The hydropower industry is a multi-disciplinary sector, and GZA is a multi-disciplinary firm. Owners of hydroelectric dams have long counted on GZA's extensive experience in the fields of dam engineering and hydrology to assist them in constructing, repairing, and maintaining their structures. GZA is also providing wider services, including permitting, environmental studies, design of new or rehabilitated small hydroelectric facilities as well as FERC Part 12D Dam Safety Inspections.



GZA performed a hydropower feasibility study for the Upper and Lower Collinsville Dams in Canton, CT

GZA has provided engineering services at projects from 900 MW to 40 kW in size. Our work scope includes full range of studies and design tasks to assist in the assessment and development of hydropower projects from conception to commissioning. This includes turbine selection and physical/structural upgrades of the powerhouse and related appurtenant facilities.

Recent projects have included resource assessments for hydropower potential at more than 300 dams owned by the Commonwealth of Massachusetts; feasibility studies for hydropower installation at two existing dams owned by the New Jersey Water Supply Authority; feasibility studies for hydropower re-development at the Collinsville Upper and Lower Dams in Canton, CT; preliminary design of a new conduit hydropower project for the Massachusetts Water Resources Authority; and design and licensing services for retrofit small hydropower facilities for two industrial clients.

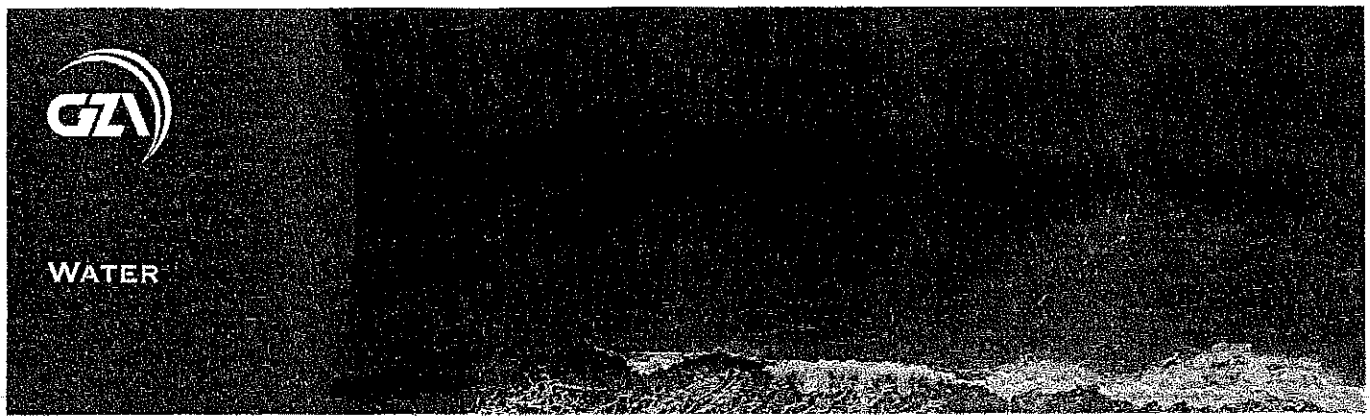
Engineering Services During Construction

GZA routinely provides engineering support services to our clients during the construction phase of our dam repair projects. We strongly believe that the design engineer-of-record be retained to provide a minimum level of field engineering services during construction to allow us to assess compliance by the contractor with plans and specifications and to make adjustments to the design to meet potentially unanticipated conditions encountered during construction.

GZA regularly provides field engineering support services during the dam construction phase.

Typical tasks include: (a) attendance at routine construction progress meetings; (b) review of contractor's submittals; and (c) respond to requests for clarifications and changed conditions. A critical part of these services deal with resident inspection where our field engineer would observe and document the progress of construction, conditions encountered, contractor effort and personnel, and compliance of the work with the project plans and specifications.

Our field engineer would act as the client's liaison with the contractor and would interface with both GZA's project manager and the client's operations staff. Our field engineer's duties will include photo-documentation of the progress of construction and preparing weekly reports documenting activities, conditions, and progress.



GZA specializes in the protection and restoration of ponds, rivers and wetlands

GZA is proactive by design. We are passionate about partnering with clients to meet the water-related challenges of climate change, resiliency, sustainability and building where the water meets the land.

Water constitutes 70 percent of the Earth's surface and 65 percent of the human body. It is the highway for 90 percent of all commerce, and the water's edge is home to 80 percent of the world's population. **Water matters.** During the last 30 years, we have successfully completed hundreds of water-related projects throughout the United States. As a full-service engineering and applied science consulting firm, we bring to each project not only our water expertise, but also our combined experience in geotechnical and civil engineering, ecological, environmental science and construction management.

PROJECT SPOTLIGHT

Post-Fukushima Flood Studies U.S. Nuclear Power Plants

THE CHALLENGE

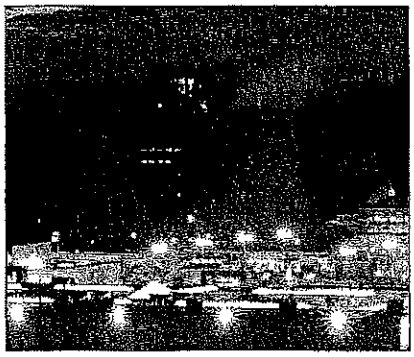
After the devastating earthquake and tsunami at Fukushima, Japan, the NRC required all U.S. nuclear power plants re-evaluate their flood vulnerability, with the evaluations to be completed within three years. GZA was retained to characterize flood hazards at 35 percent of U.S. nuclear power plants.

OUR SOLUTION

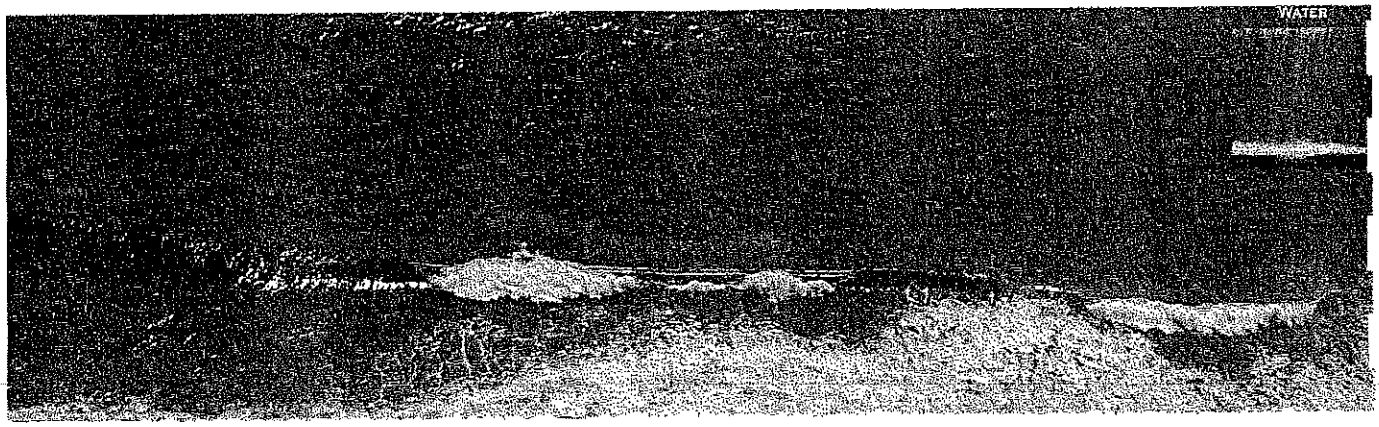
GZA introduced state-of-the-art technologies such as region-specific meteorology studies, probabilistic analysis of flooding due to storm surge, and hydrodynamic computer modeling for analysis and visualization of river, storm surge and waves, and local precipitation flooding.

THE RESULT

GZA's studies assessed the flood hazard of most U.S. major river watersheds, the Gulf of Mexico and the U.S. East Coast. Twenty-three power plants were evaluated in three years, meeting NRC's schedule. The results are being used to assess the vulnerability of these critical facilities and to create flood mitigation measures and response plans.



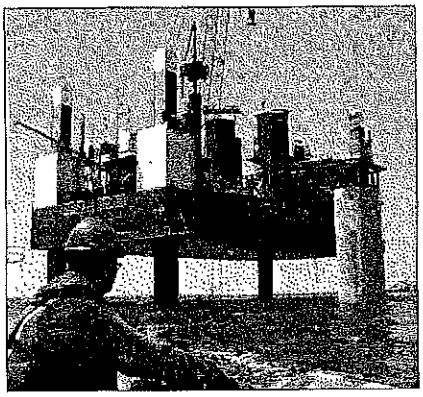
GZA nuclear power plant flood studies



GZA's water services staff includes planners; civil, geotechnical and structural engineers; ocean and coastal engineers; hydrologists and geohydrologists; oceanographers; meteorologists; ecologists; and natural resource specialists. We focus on four primary practice areas:

Marine and Waterfront Engineering

We provide engineering and environmental expertise in the design, permitting and construction of marine and waterfront facilities. Our services include site investigation, condition surveys, waterfront structure design, permit preparation and construction management. We also provide complete coastal engineering services, including hydrodynamic modeling of waves, storm surge and beach processes, coastal resiliency and estuary management. Clients include port authorities, industry, power generation and transmission, marine and heavy construction, developers, marinas, and local, state and federal government agencies.



A GZA marine and waterfront project in Mexico

Dams and Levees

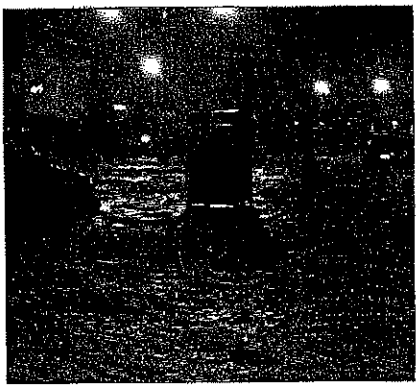
GZA excels in the assessment, design and construction of new dams and levees, and the rehabilitation and decommissioning of aging facilities. Projects have included public and privately-owned dams, dikes and levees, and hydraulic, flood and drainage control structures for power plants, municipal, industrial and mining facilities. With more than 1,000 dam projects successfully completed, GZA has earned a national reputation in this practice area.

Water Resources

Our engineers and scientists offer integrated, multidisciplinary expertise and experience in the investigation, planning and protection of water resources. We specialize in water supply investigations (surface and groundwater), sustainability, watershed management, diagnostic evaluations and the restoration of rivers and ponds, stormwater management and infrastructure design, permit support, environmental resource management, and construction support services. We also provide complete hydrodynamic modeling of groundwater aquifers, rivers, coastal processes, sediment transport and estuaries. Our laboratory, New England Bioassay, is one of the leading ecological and whole effluent toxicity testing laboratories in the United States.

Climate Change and Hazard Planning

Addressing the challenges of natural hazards and climate change requires a broad spectrum of skills and experience. GZA's climate change team includes specialists in planning, meteorology, hydrodynamic flood modeling, hazard mitigation, vulnerability assessment, benefit-cost analyses, resiliency and river, ocean and coastal engineering. As a nationally-recognized leader in natural hazard assessment, mitigation and climate change adaptation, we have been responsible for assessing the hazard vulnerability of some of the most critical infrastructure in the United States.

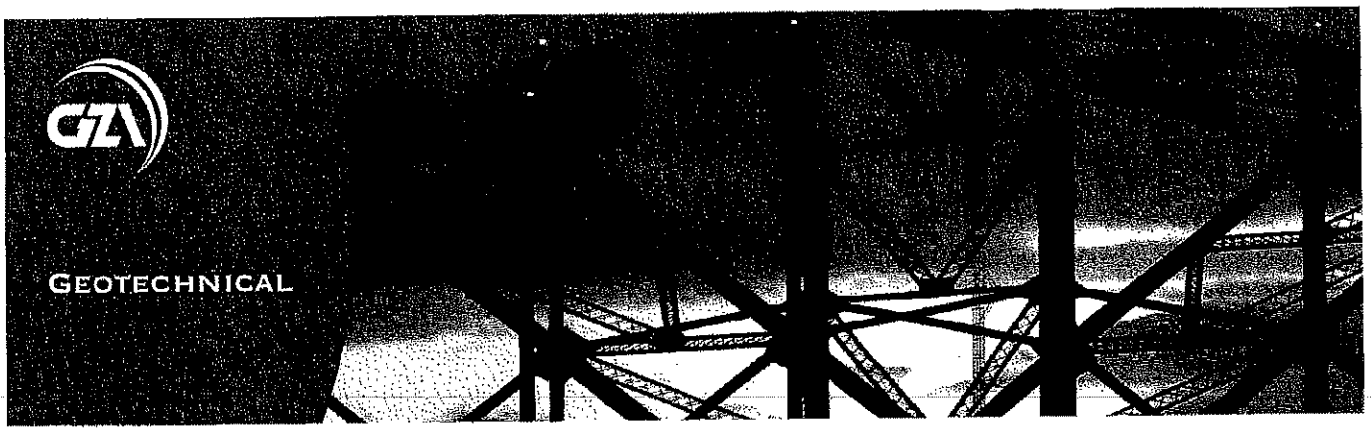


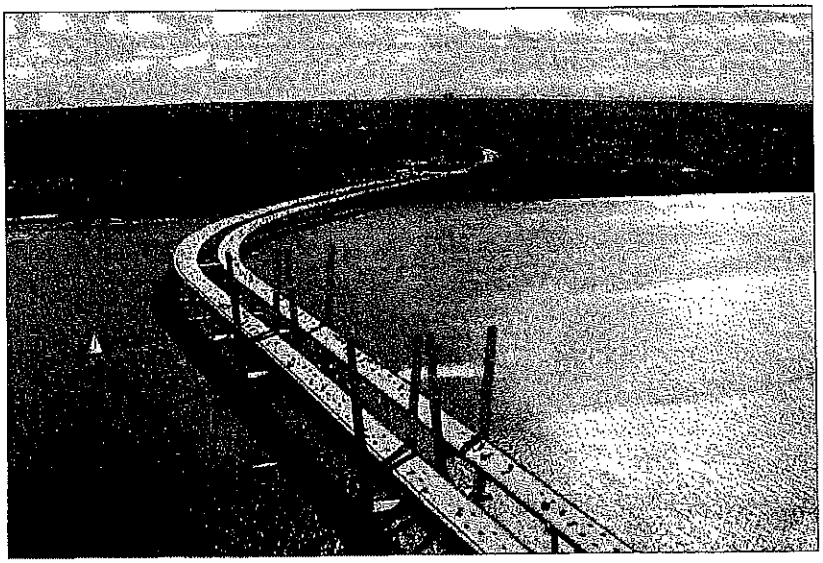
GZA assists municipalities with mitigating urban flooding

When water matters, choose the company with national experience. **Choose GZA.**

WATER SERVICES

- MARINE AND WATERFRONT STRUCTURES
- DAMS AND LEVEES
- WATER RESOURCES
- CLIMATE CHANGE AND HAZARD PLANNING





The New NY Bridge, Tarrytown, NY. courtesy of New York State Thruway Authority

GZA is proactive by design. With a 50-year track record of underground engineering excellence, we provide engineering analyses and design services for foundations, tunnels, dams, buried utilities, marine facilities, highways, railroads, site development and temporary underground structures. Originally founded as a soils and foundations specialty consultant, GZA has grown to provide environmental, ecological, water and construction management services in addition to maintaining excellence for providing geotechnical solutions. By integrating these additional disciplines, we create a unique combination of engineering expertise, innovation, sensitivity to client needs, and responsiveness tailored to the specific permitting, structural or construction issues associated with each project. When you're looking for a solution in the built environment, **look to the leader in innovation and technical excellence: GZA.**

PROJECT SPOTLIGHT

MTA No. 7 Line Extension along 41st St. from 8th to 11th Avenue Contract C-26503, New York, N.Y.

THE CHALLENGE

GZA was retained to evaluate ground conditions and design the rock support system for the 34th Street cavern, the Tunnel Boring Machines (TBMs) and three access shafts. During construction, GZA performed geologic mapping and observed installation of ground support for compliance with the design drawings. GZA also provided geotechnical and structural instrumentation monitoring to evaluate performance of the ground support system and confirm anticipated ground behavior during construction.

OUR SOLUTION

GZA completed supplemental subsurface explorations and field testing to provide a more detailed geologic interpretation of ground conditions and rock mass classification required to design the support system. GZA performed 3D modeling of major rock discontinuities.

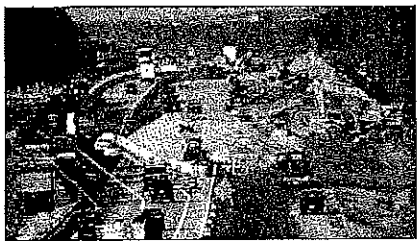
THE RESULT

Based on real-time interpretation during construction, GZA determined less ground support was required than originally anticipated, which allowed the main cavern to be completed five months ahead of schedule.

C-26503 NYCT No. 7 Line Extension

GZA is nationally recognized for a diverse range of geotechnical, environmental, hazardous materials management, water and marine engineering services that we provide for our nation's infrastructure and the building industry. Analysis and design services for various types of new and renovated infrastructure projects include:

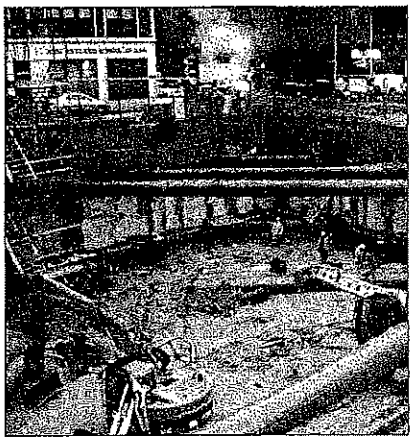
- Bridges, highways and railroads
- Marine and waterfront facilities
- Tunnels (including tunnel inspections)
- Buildings
- Utilities/transmission structures/ substations
- Nuclear power plants
- Airports
- Dams and water resource projects



Maine Turnpike Widening and Modernization Project, Biddeford/Scarborough, Maine

Working for both private and public clients, GZA has provided geotechnical services for a multitude of building projects, including:

- Commercial and retail developments
- Parking garages
- Primary and secondary academic facilities
- Health care and medical facilities
- Hospitality facilities
- Government buildings
- Cultural venues
- Sports facilities

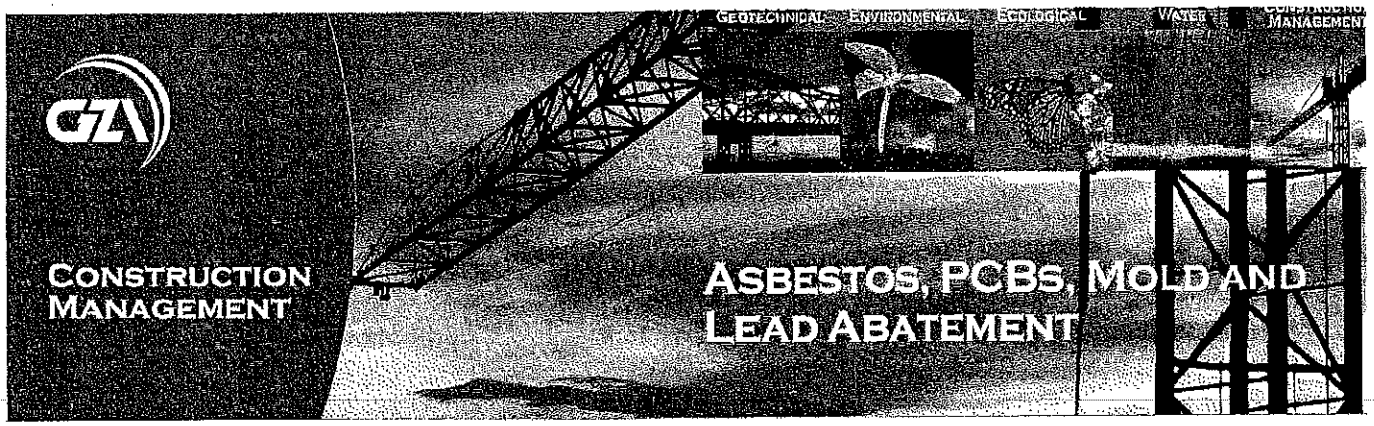


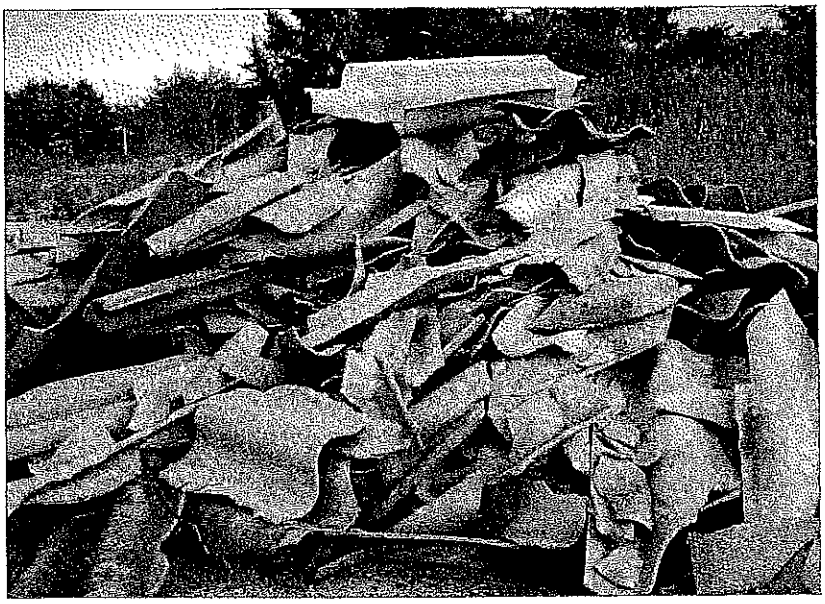
W Hotel, Boston, Mass.

GZA is dedicated to providing outstanding client service and the best technical solutions in our industry. Our strong technical expertise, knowledgeable staff, integrated project management capabilities, and superior communication provide a proven model for success. For innovative, practical solutions to above and below ground challenges, choose a firm that has been committed to satisfying the needs of its clients for more than half a century. Choose GZA.

Geotechnical Services

- Subsurface Investigation, Underground and Rock Slope Characterization
- Shallow and Deep Foundation Evaluation and Design
- Design and Construction of Tunnels for Railroads, Highways and Utilities
- Ground Improvement Techniques
- Underpinning
- Earth Support Systems and Cofferdam Design
- Temporary and Permanent Dewatering System Design
- Rock Slope Assessment and Rockfall Control Design and Construction
- Soil Slope Stability Assessment and Stabilization Design
- Assessment and Mitigation of Embankment and Foundation Settlement
- Soft Ground Design and Construction
- Liquefaction Mitigation
- Seismic Site Characterization and Risk Mitigation
- Blasting and Vibration Control
- Landfill Design, Construction and Operation
- Geotechnical Instrumentation Installation and Monitoring
- Static, Dynamic and Non-Destructive Integrity Pile Testing
- Osterberg Cell and Static Load Testing for Drilled Shafts
- Cross-Hole Sonic Logging and Thermal Integrity Profiling for Drilled Shafts
- Soil/Rock Anchor and Tieback Design and Testing
- Rating and Load Testing Existing Foundations
- Geothermal Investigation, Design and Construction
- Soil and Foundation Data, Engineering and Baseline Reports
- Risk Register Preparation



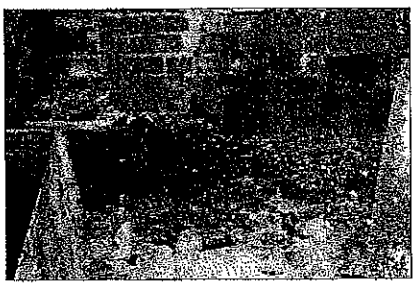


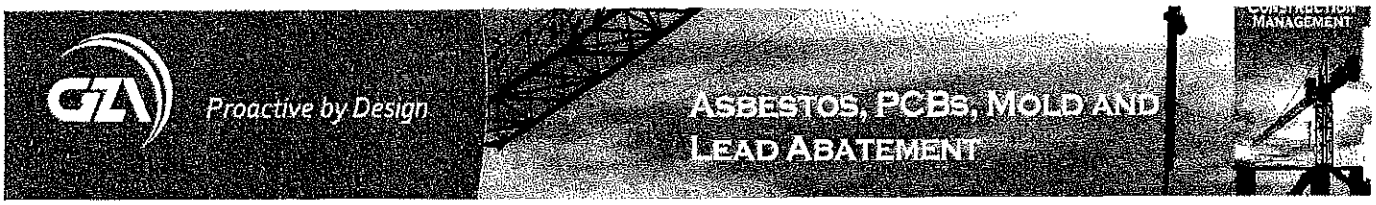
Damaged Asbestos

GZA is proactive by design. As an integrated services firm focused on a holistic approach to construction management, GZA safely provides comprehensive asbestos, lead, polychlorinated biphenyl (PCB) and hazardous building materials management services to a wide variety of clients. Our staff is trained and licensed in a number of states, and actively works with clients to develop comprehensive, solutions-oriented response strategies for the management of asbestos, lead paint, PCB-containing paint, caulking and glazing, as well as a number of other hazardous buildings materials. Additionally, our management experiences extends to the handling and remediation of radon, mold, and bacteria in indoor built environments. Whether renovating, maintaining, or demolishing an existing structure, choose the firm that comfortably provides overall construction management services to properly handle and remove any type of building contaminant. **Choose GZA.**

SERVICES SPOTLIGHT

- IAQ Monitoring & Surveillance
- HVAC/Ventilation Troubleshooting
- Contamination from Previous Use
- Odor Investigations
- Carbon Monoxide Testing
- Assessment of Vapor Intrusion from Underground Contaminants
- Managing Occupant Complaints & Public Relations
- Temperature & Humidity Testing
- Moisture Intrusion Evaluation
- Mold/ Bio-Aerosol Monitoring
- Temperature & Humidity Surveys
- Remediation & Oversight
- Post-Remediation Monitoring
- Operation & Maintenance Programs
- Litigation Support
- Facility Surveys, Air Testing and Chemical Sampling
- Asbestos, Radon, Lead Paint, PCBs, Mercury & EMF
- Operations and Maintenance (O&M) Plans





Proactive by Design. Our Company Commitment. Excelling as a multi-disciplinary, multi-office firm of proactive, bright, and dedicated people, GZA supports our clients and our profession through demonstrated expertise in each of our five core service areas. Woven together, these services integrate with each of our client-focused markets, providing unparalleled value from a single company. **We are Proactive by Design. We are One Company. We are GZA.**

Geotechnical Services

- Subsurface Investigations
- Deep and Shallow Foundation Solutions
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- Tunneling and Underground Construction
- Earth Support Design and Dewatering
- Seismic Evaluation
- Geothermal System Design
- Landfill Design
- Instrumentation and Deep Foundation Testing

Environmental Services

- Environmental Site Assessment and Investigation
- Site Remediation
- Environmental Health and Safety Regulatory Compliance
- Air Quality
- Hazardous Materials Management / Demolition
- Sustainability Advisory Services

Ecological Services

- Wetland Delineation, Assessment and Design
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Water Consulting Services

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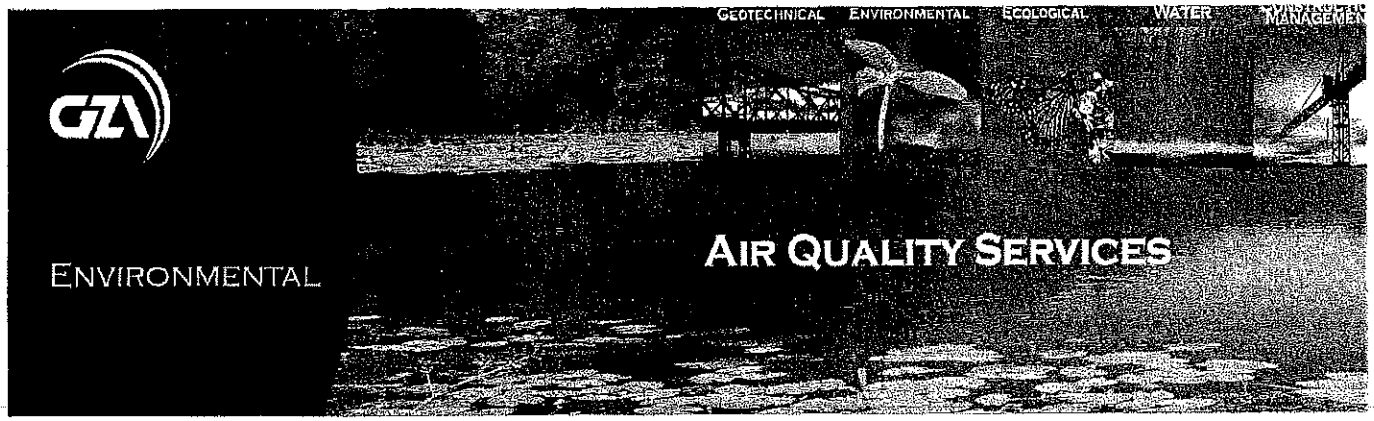
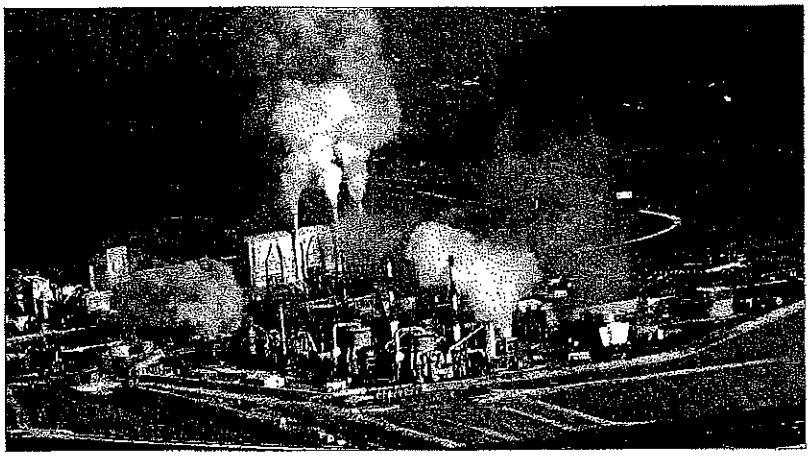
Construction Management Services

- Project Management
- Program Management
- Demolition and Decommissioning
- High Risk Remediation/ Specialty Clean Construction
- Construction-related Building Services
- Asbestos, Lead, PCB's, and Mold Abatement

CONSTRUCTION MANAGEMENT SERVICES

- PROJECT MANAGEMENT
- PROGRAM MANAGEMENT
- DEMOLITION AND DECOMMISSIONING
- HIGH RISK REMEDIATION/ SPECIALTY CLEAN CONSTRUCTION
- CONSTRUCTION-RELATED BUILDING SERVICES
- ASBESTOS, LEAD, PCB'S AND MOLD ABATEMENT



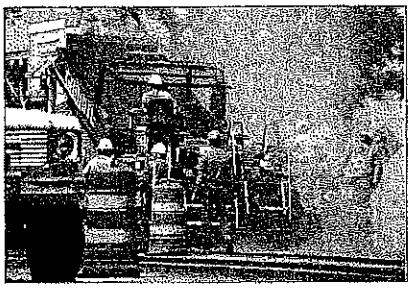


GZA is proactive by design. As a recognized industry leader in air quality consulting, permitting and engineering services, we have the experience necessary to plan effective air compliance and permitting strategies, while successfully negotiating with regulatory agencies. Many of the nation's most significant environmental regulations have been adopted in response to growing concerns about air quality impacts. GZA completes both Title V and New Source Review permit applications, performs air quality impact analyses, and conducts air pollution control technology evaluations to address these concerns. We closely monitor state and federal regulatory changes, and use this knowledge, combined with our strong regulatory background, to advise clients on how these changes will impact their business. Most air quality issues deal with standards compliance, or permit terms and conditions. By choosing effective solutions, our goal is to minimize emissions and impacts, while providing our clients with solutions that offer operational flexibility, lower energy consumption, and reduced costs. When faced with decisions that involve expensive emission controls or demonstrated impacts of air quality pollutants, choose the firm known for providing effective regulatory solutions. **Choose GZA.**

SERVICES SPOTLIGHT

GZA's Air Quality Services Include:

- Source characterization/emission inventories.
- Air permitting (Prevention of Significant Deterioration (PSD), Non-Attainment New Source Review (NNSR), and Title V Permits).
- Regulatory analysis/compliance strategy and implementation.
- Control technology performance and cost assessments (SOx, NOx, VOC, HAPs).
- Traditional air dispersion modeling; Indirect source and secondary impact permitting



GZA Proactive by Design

AIR QUALITY SERVICES

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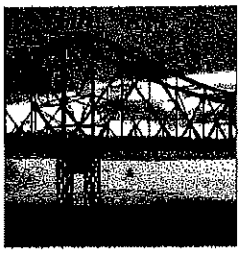

Geotechnical Services

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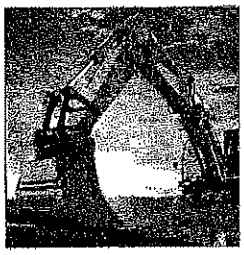

Construction Management Services

- Project Management
- Program Management
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- Construction-related Building Services
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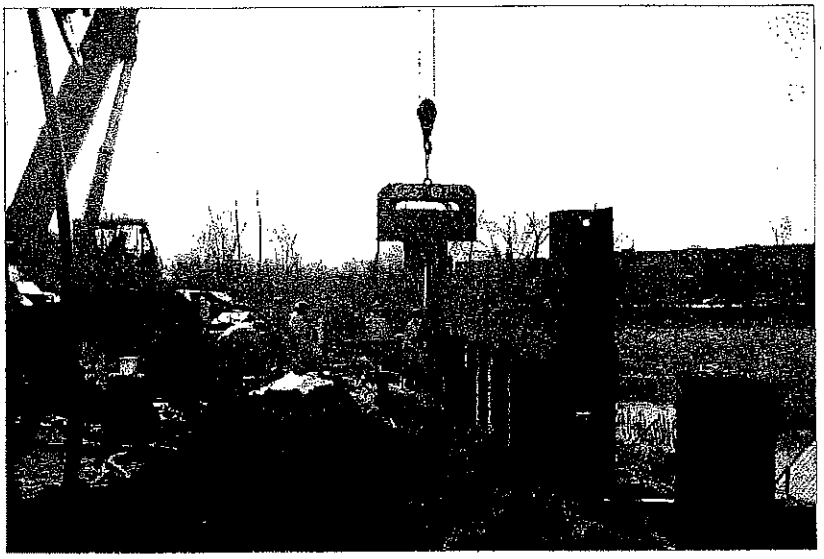
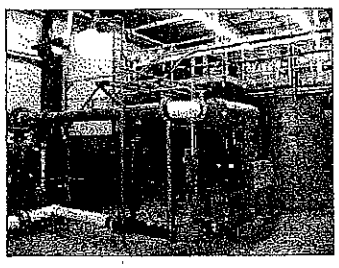
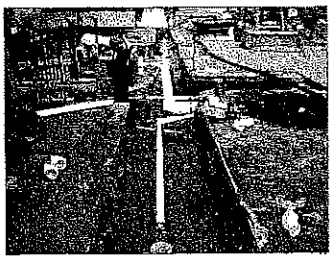
ENVIRONMENTAL SERVICES

- ENVIRONMENTAL SITE ASSESSMENT AND INVESTIGATION
- SITE REMEDIATION
- ENVIRONMENTAL HEALTH AND SAFETY REGULATORY COMPLIANCE
- AIR QUALITY
- HAZARDOUS MATERIALS MANAGEMENT / DEMOLITION
- SUSTAINABILITY ADVISORY SERVICES



GZA is proactive by design. With the unique ability to tailor investigation and assessment phase activities with ultimate remedial goals in mind, we deliver client-focused, solutions-driven remediation projects that lead to practical, cost-effective, and timely remedial implementations. We combine a pragmatic approach with strong technical remediation capabilities to deliver remediation projects that save our clients' time and money, while reducing liability. Our skilled practice covers remediation projects from initiation through project closure, and includes remedial investigations; human health and ecological risk assessments; feasibility studies and design; construction, operation and maintenance of in-situ and ex-situ remedial systems; and remediation construction management. When seeking a customized solution to a specific issue in the field, choose the firm with the ability to mobilize quickly to address unique solutions from any perspective. **Choose GZA.**





SERVICES SPOTLIGHT

Site Remediation

- Site Remediation
- Remedial Investigation/Feasibility Studies
- Remedial Design and Implementation
- Facility Decommissioning/Demolition
- In-Situ Groundwater Remediation
- In-Situ Soil Remediation
- Federal Superfund Investigation and Remediation
- Environmental Liability/Cost Evaluations
- Green Remediation

Biogeochemical-Based Remediation

- Biogeochemical-Based Remediation
- Hydrogeologic and Biogeochemical Site Assessment
- Monitored Natural Attenuation
- Enhanced Aerobic In-Situ Bioremediation
- Reductive Dechlorination
- Chemical Oxidation
- Zero-Valent Iron Injections

In-Situ Remediation

- In-Situ Thermal Remediation
- In-Situ Solidification / Stabilization
- Containment/Capping
- In-Situ Groundwater Remediation
- In-Situ Soil Remediation

Contract to Closure

- Guaranteed Fixed Priced Remediation
- Environmental Liability Transfer
- Remedial Risk Modeling

MGP Remediation

- Liability Assessments and Risk Management Programs
- Site Investigation and Remediation
- Remedial Design
- Construction Management Services
- AirLogics/Perimeter Air Monitoring
- Expert Testimony
- Program Support
- Historical Research

Proactive by Design

Environmental Remediation Services

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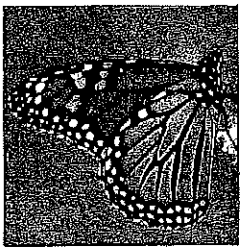

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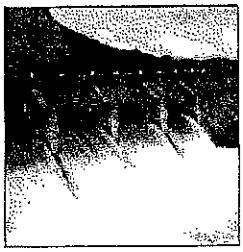

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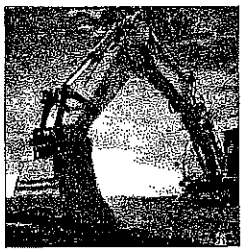

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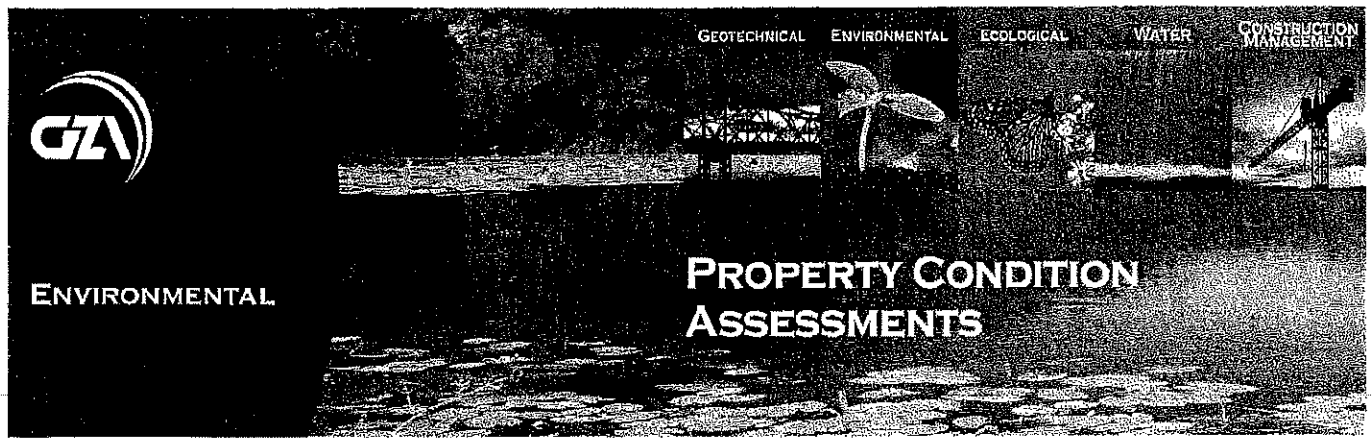


GZA is proactive by design. GZA is a full-service, multi-disciplinary consulting/engineering firm offering a comprehensive range of Property Condition Assessment services to meet our clients' needs and strategic objectives. Founded in 1964, we have over 50 years of direct experience in providing focused, responsive service to our diverse clientele, which ranges from small-scale single-facility private manufacturers to international corporations, and also includes a wide range of institutions (schools, colleges/universities, and hospitals), public/municipal entities, and governmental agencies (e.g., Department of Defense), and law firms in additional to our traditional base of private-sector industrial clients. Our staff of more than 580 professionals includes environmental, chemical, civil, and geotechnical engineers; regulatory compliance specialists; certified industrial hygienists and certified safety professionals; and certified hazardous materials managers and trainers. **Choose GZA.**

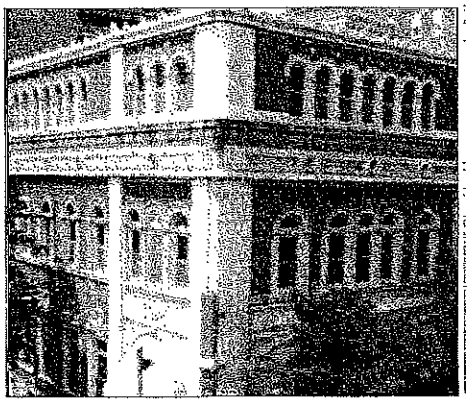
GZA's has extensive experience providing property condition services for:

- Shopping Malls
- Retail Buildings
- Office Buildings
- Industrial Buildings
- Storage & Distribution Centers
- Multi-Family Housing
- Healthcare Facilities
- Recreational Facilities
- Schools & Universities
- Mobile Home Parks

GZA's Comprehensive Services include:

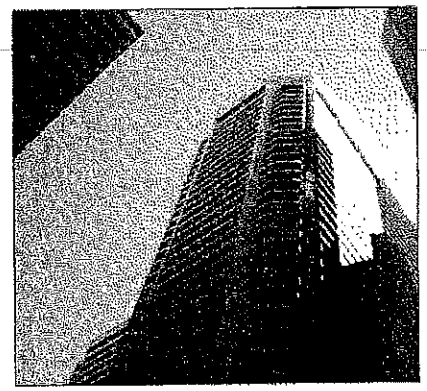
- Environmental Consulting
- Geo-Civil Engineering
- Environmental Remediation
- Environmental Health & Safety
- Solid Waste Management
- Information Management
- Support Services

GZA professionals have extensive experience with commercial, residential, industrial and institutional type properties, and are fully versed in the unique issues often associated with each property type.



GZA *Proactive by Design*

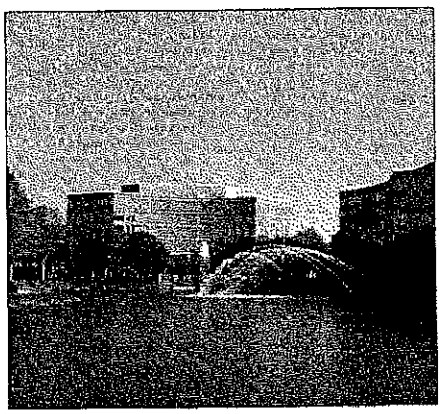
PROPERTY CONDITION ASSESSMENTS



Overview

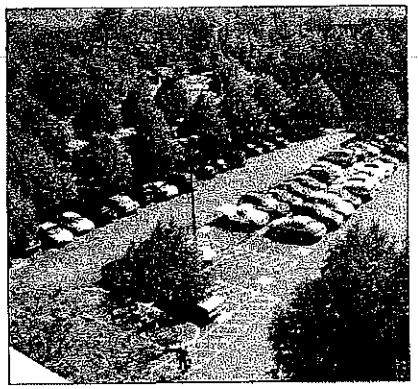
The transfer of commercial property often entails complex negotiations and lending considerations, including those associated with the physical integrity and status of the property itself. Until recently, assessing the condition of properties was completed under a variety of specifications. Initially established in 1998 and last updated in 2015, ASTM guidelines have been established to standardize the scope and methods used to perform Property Condition Assessments (PCAs).

GZA participated on the original ASTM task force charged with developing the standards. Working with financiers, insurers, developers and real estate professionals, our staff helped to devise the recommended quality control guidelines for PCAs. As has been the case with the Environmental Site Assessment protocol, ASTM's Property Condition Assessment procedure (ASTM E-2018-15) has become the industry standard.



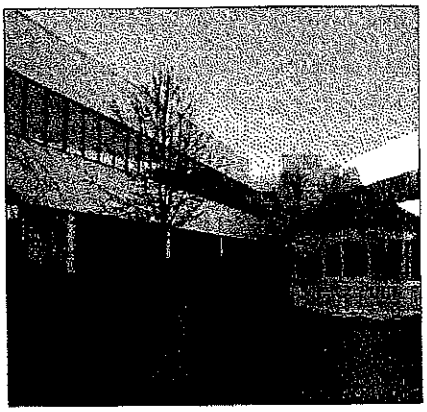
Aside from market value considerations, the physical condition of property impacts the viability of development and redevelopment plans. Significant physical deficiencies, such as obsolete HVAC systems or failed parking surfaces, directly affect the profit margins of investment properties. As a result, condition assessments are often required by lenders in order to secure financing. Buyers will benefit from comprehensive PCAs by limiting the potential for their financial loss when purchasing commercial property for short-term and long-term investments. PCAs completed under ASTM standards provide estimates of probable costs for changes or repairs that require immediate attention (Deferred Maintenance Items). The PCA also provides opinions concerning probable costs to remedy physical deficiencies that need to be made in the near future, usually within the first year or two (Short-Term Repairs). Estimates provide assessment of renovation costs based on current market rates, enabling stakeholders to project reasonable budget figures when considering property values.

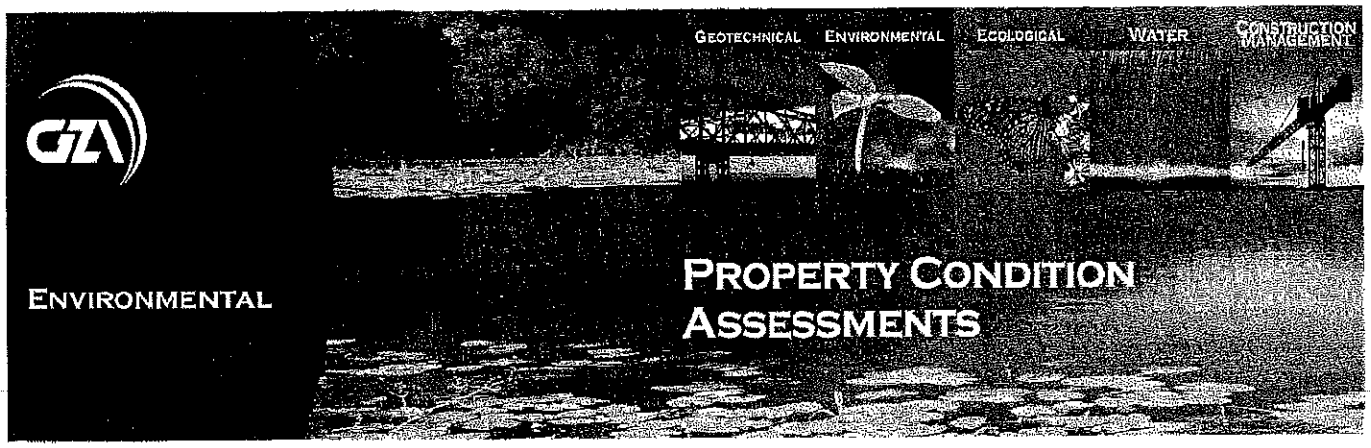
GZA's Property Condition Assessment reports exceed the requirements outlined by ASTM, and take the cost estimating and long-range budget forecasting a step further by including an additional "Capital Needs" estimate for longer term evaluations. The term of evaluation is typically between 5 and 12 years, but any length can be set by the client to meet specific needs.

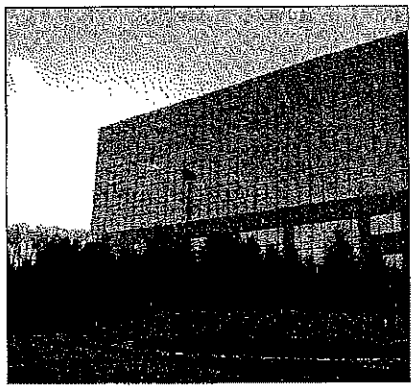


Having participated in property evaluations and assessments for more than 20 years, GZA's staff is positioned to help clients protect their investment interests using these new industry endorsed guidelines. Our staff includes trained professionals proficient in the field of assessments, cost estimating and engineering solutions.

GZA's staff is equipped to perform assessments for all types of buildings. We are thoroughly familiar with issues affecting structures ranging from single-story retail facilities to high-rise office buildings.



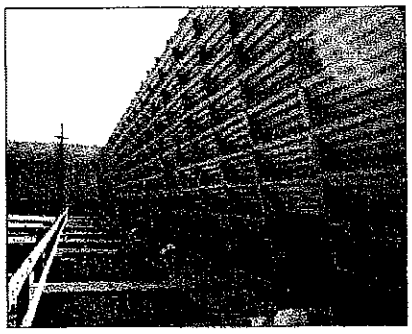




GZA's PCAs are prepared with a focus on both the immediate and long-term needs at a property, including estimated costs for repair, replacement or significant renovations.

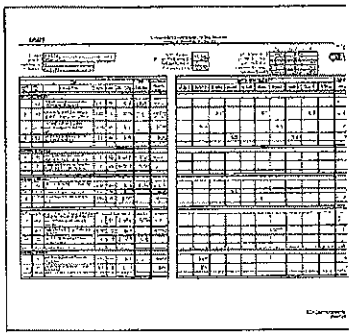
During the performance of a typical Property Condition Assessment, GZA conducts interviews with site personnel and maintenance contractors and reviews the following:

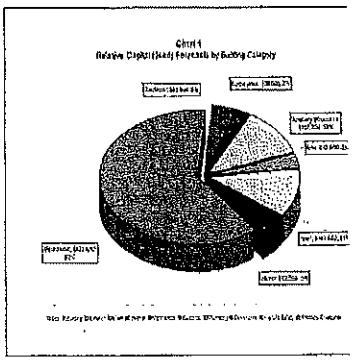
- Provided construction plans, records of capital expenditures and historical repairs, budgets for improvements and other relevant documents
- *Site features*: soil conditions, storm water drainage, and landscaping
- *Pavement & sidewalks*: wear, traffic conditions, parking, and lighting
- *Exterior building walls*: visible distresses, water damage, interior walls
- *Exposed structural components*: connections and support materials
- *Roof coverings*: flashing, penetrations, drainage, parapets, expansion joints
- *Utility connections*: storm water, sanitary sewer, water, gas, electric.
- *HVAC systems*: heating, cooling, ventilation, controls, energy management
- *Electrical systems*: transformers, switchgear, distribution, emergency power
- *Plumbing systems*: drainage, wastewater and domestic water
- *Fire protection*: standpipes, suppression systems, alarms, smoke control
- *Conveyance*: lifts, passenger and freight elevators and escalators
- *ADA Accessibility*: parking, exterior route, interior route, restrooms, elevators

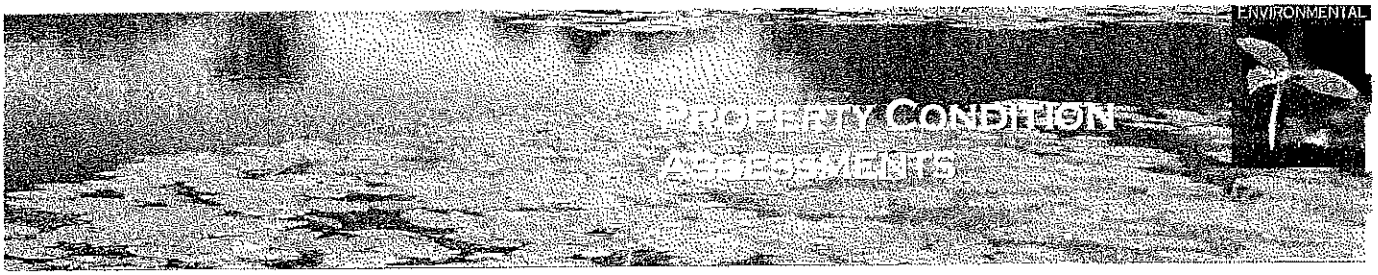


A typical PCA scope includes a review of mechanical, electrical and plumbing systems. These systems often contribute greatly to overall building repair and renovation costs.

GZA report formats provide easy access to information for our clients. We are extremely flexible, and can present data in a variety of formats designed to meet specific client needs and preferences.







PROPERTY CONDITION ASSESSMENTS

Personnel

GZA typically utilizes Senior Engineers during the PCA field survey and report preparation to provide our clients with more detailed reports. This approach has enabled our clients to more accurately budget for capital improvements and often reduces the actual costs for property purchases and financing for the property. Our Senior Management personnel are actively involved in the PCA preparation and review process. In addition, our clients have full access to our entire team, including the field assessor, report reviewer and any additional consultants, in order to provide first-hand accounts of field conditions, and to discuss any report concerns.

Typical Scope of Services

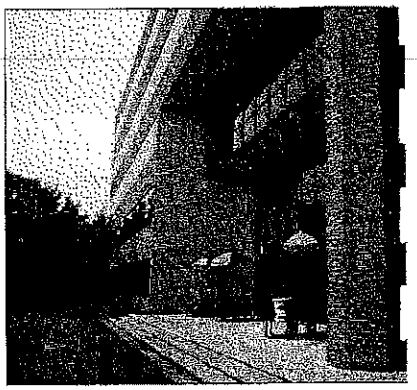
GZA understands the budgetary constraints relating to various property transactions, as well as aggressive due diligence schedules. Our scope of PCA services can be provided with varying levels of effort and expertise, and we can help to design an evaluation program to meet specific Client needs and concerns. We have developed tiered levels of service to better define our efforts at the proposal stage, rather than at the time of the report.

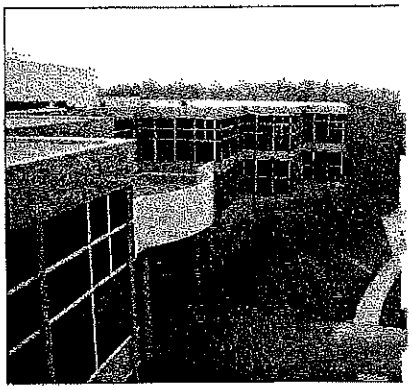
These levels of service include the following:

Level I PCA: This assessment is prepared by a qualified professional, performing a visual survey of the property to assess the general condition of the property, structures and associated mechanical components. An individual architect or engineer with general experience in the evaluation of all of these building components typically conducts the field effort. Our Level I PCA is considered to be a visual assessment that exceeds the requirements of ASTM E-2018-15. Hands-on testing, measurement or operation of equipment is not included in this evaluation. This PCA may be escalated to a more thorough Level II or III PCA following the initial site visit and evaluation, and after discussion with the Client.

Level II PCA: This assessment includes the Level I PCA, with specific items of concern investigated in more detail by one or more specialist in the respective fields (mechanical engineer, roofing consultant, etc.). These more detailed visual assessments may be incorporated into a single PCA report discussion, or may be presented in separate reports.

Level III PCA: This assessment includes the Level I PCA, with specific items of concern investigated in more detail by a team of specialists, including specialty subcontractors where warranted, and including operation and testing of individual systems or components where warranted and approved. These more detailed assessments, which may include evaluation and test data, are typically presented in separate reports or as appendices to the general report.

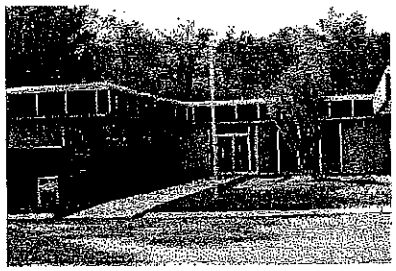




Firm Overview

Since our founding in 1946, Benesch has specialized in providing civil and structural engineering services to our clients in transportation and infrastructure development. Today, we are a multi-disciplined engineering and environmental services firm with clients across the country. Our projects range in size and complexity from large scale, high-profile public improvements to smaller, more focused assignments. Our clients include federal, state and municipal government agencies, real estate developers, private corporations and architectural firms.

Our founder, Alfred Benesch, brought a collaborative spirit to the practice, encouraging the concept of teamwork coupled with engineering excellence. Excellent service resulted in larger more complex projects over time. Growth was inevitable. When the time came, Benesch sought out like-minded organizations—like Connecticut's **Purcell Associates**—to expand their expertise and skill set. In October 2012, James P. Purcell Associates, Inc., merged with Alfred Benesch & Company.



Benesch's Glastonbury, CT office—***only 23 miles from UConn's Storrs campus***—allows for responsive client service and stakeholder interaction.

Benesch employs nearly 600 professional and support personnel across 14 states: Colorado, Connecticut, Illinois, Indiana, Kansas, Massachusetts, Michigan, Missouri, Nebraska, North Carolina, Ohio, Pennsylvania, Tennessee, Wisconsin and Washington D.C. We employ engineers, scientists, construction managers and designers that rank among the highest in their professions. Numerous professional accolades have been awarded to our employees for outstanding contributions in their fields. They augment their expertise by utilizing advanced design and construction concepts, combined with the latest technology, to create practical solutions.

Our services range from initial planning and feasibility studies through to construction management. We have designed complex highway interchanges, new commuter railway systems and major river bridges. Benesch has also developed water asset management plans and has experience planning, designing and constructing water treatment facilities and water transmission and distribution systems.

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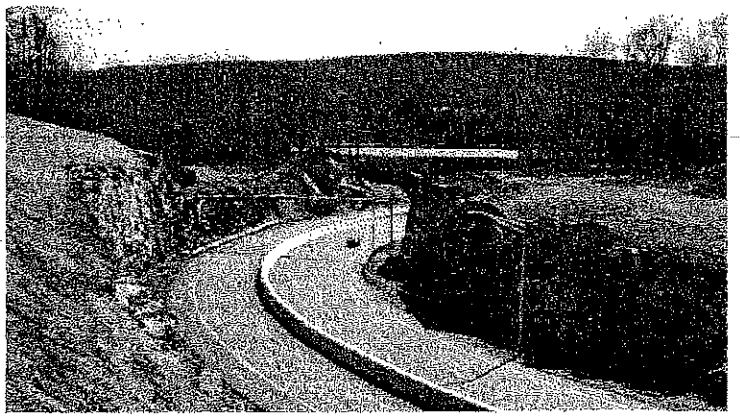
2015 RANKING
ENR
Engineering News-Record
THE TOP 500 DESIGN FIRMS

Benesch is consistently ranked among the top 500 consulting engineering firms in the United States by ***Engineering News Record***. Our reputation speaks for itself among industry peers and clients. The frequency of repeat business is indicative of our steadfast dedication to providing quality services.

Route 2 Roadway & Corridor Improvements

Preston, Ledyard, & North Stonington, CT



Winner of three 2010 Distinguished Awards—ACEC, CSCE, CBC

Background: Benesch was retained by the Mashantucket Pequot Tribal Nation (MPTN) to provide roadway design and full-time construction engineering and inspection services for this project, located in Preston, Ledyard and North Stonington, CT. The project was divided into two phases along Route 2.

Scope: Phase I, located in the Towns of Preston and Ledyard, involved roadway widening of a one-mile stretch of Route 164 to MPTN Lot #10 - Employee Parking. The construction of Phase I provided an additional travel lane in each direction while avoiding all direct wetland impacts.

Phase II, located in the Towns of Ledyard and North Stonington, involved major roadway construction from MPTN Lot #10 to approximately 2,900 feet east of CT Route 214—including approximately 850 feet of Route 214—for a total length of approximately 1.5 miles. Phase II construction created a new roadway, which runs parallel to the existing Route 2. The new roadway serves as a bypass for through traffic wishing to avoid the three Foxwoods' entrance traffic signals and Route 214. Interchanges were created at the existing West Drive and Route 214 to provide resort patrons access to Route 2, which is being maintained as a frontage road to access Foxwoods. The new West Drive interchange consists of three legs of a diamond-type interchange while roadway loops were incorporated into the interchange ramps at Route 214 on the south.

A strong, collaborative private-public partnership, combined with fast track design, permitting, and construction, enabled *completion of this project in a 27-month period.* Achievements and creativity were realized throughout the project timeline. Notable examples were:

- Utilization of an expedited and multi-tiered approach to the design and permitting process in a compressed timeframe
- Rapid Building Techniques for construction with use of pre-cast structures and modular precast retaining walls, close to 30 feet in height
- Construction of a curved steel girder structure over Route 2
- Rock cuts of 40 feet in height and a volume of 190,000 cubic yards completed and sequenced to keep the Project on the tight construction schedule
- 160,000 cubic yards of earth moving operations
- Use of form liners and artistic design on key visible abutment walls and structures
- Integrated communications and collaboration between MPTN, Benesch, and Cardi as a forerunner of an Integrated Project Delivery System

Key Issues:
- Highway Design
- Bridge Design
- Maintenance & Protection of Traffic
- Surveying
- Environmental Permitting
- Utility Coordination / Design
- Construction Engineering & Inspection

Project Owner:
Keith Cove
Executive Director
Department of Public Works, Community Planning and Property Management
Mashantucket Pequot Tribal Nation
103 Pequot Trail
Mashantucket, CT 06339
(860) 812-3450

Start Date: 2004

Finish Date: 2010

Firm Role: Prime

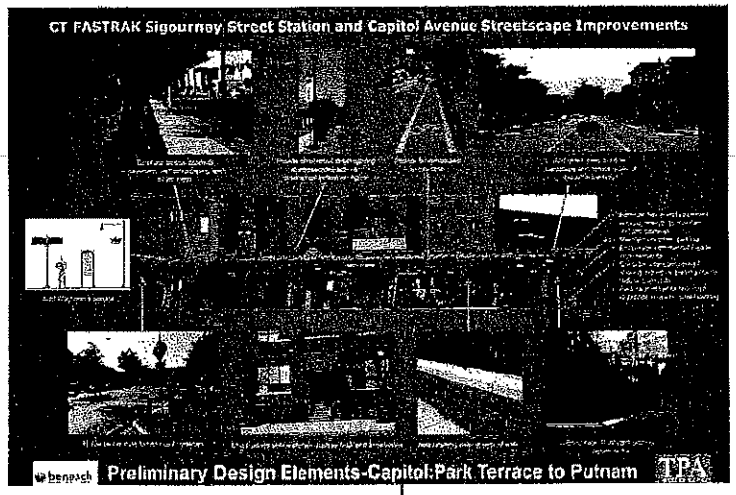
Entire Project Cost:
$60,000,000

Firm's Fee:
$5,500,000

benesch

Sigourney Street Station Streetscape Improvements

Hartford, CT



Key Issues
- Transportation Analysis
- Traffic Data Collection, Organization & Analysis
- Landscape Architecture
- Alternative Alignment Assessment
- Pedestrian Access
- Agency Coordination
- Public Outreach

Project Owner:
Sandy Fry
Grants and Procurement Program Coordinator
Greater Hartford Transit District
One Union Place
Hartford, CT 06103
860-247-5329
sfry@ghtd.org

Start Date: 2014

Finish Date: 2015 - Ongoing

Firm Role: Sub-consultant

Entire Project Cost:
$2,000,000

Firm's Fee:
$203,000

Overview: Benesch joined prime consultant TPA Design Group (TPA) to provide the Greater Hartford Transit District (GHTD) with pedestrian and streetscape design services for improvements to several streets located in the vicinity of the proposed Sigourney Street Station on the CT*fastrak* busway line. The design efforts intend to improve ridership potential, livability and sustainability of the communities around the station

Scope: Benesch is participating in public outreach efforts along with providing traffic and structural engineering services for the project. A detailed site investigation was performed to observe the general site conditions, traffic patterns, and traffic management. The existing facility and surrounding environment were documented using a combination of photographs and video. Traffic count and crash data for the project area was obtained from the City of Hartford and State of Connecticut. Turning movement counts were performed during morning and afternoon peak periods at five (5) intersections. We also reviewed documentation pertaining to the project as well as other projects in the vicinity. Landscape architectural services provided by TPA include pedestrian, bicycle, and streetscape improvements of several streets in the area.

Benesch is currently preparing preliminary design plans for sidewalk reconstruction, including planting strips and curb ramps; traffic calming measures; traffic signal revision to accommodate pedestrian crosswalk and phasing changes and structural engineering associated with bridge lighting. Cost estimates are being developed and will be revised throughout the design process. Bid documents and construction management services will also be provided.

Unique Features: The completed station improvements will boast new and/or enhanced handicapped accessible sidewalks, pedestrian-scale crosswalks, bridge and overpass lighting, traffic calming and wayfinding signage and aesthetic improvements.

Route 147 Roadway & Bridge Improvements

Agawam/West Springfield, MA

Key Issues

- Complete Streets Approach
- Three Interconnected Traffic Signals
- Coordinating Utility Relocations
- Drainage & Stormwater Management
- Environmental Assessment & Permitting
- Right-of-Way / Layout Plans
- Public Participation Process
- Traffic Management Plans
- Coordination with MassDOT

Project Owner:
Marie Rose, PE
Director of Project Management
Massachusetts Department of Transportation
10 Park Plaza, Room 6340
Boston, MA 02116
(857) 368-9383
Marie.Rose@state.ma.us

Start Date: 2010

Finish Date: 2015 - Ongoing

Firm Role: Prime

Entire Project Cost:
$17,300,000 (est.)

Firm's Fee:
$1,118,000

Background: Located at the western end of the Memorial Avenue corridor, the Morgan Sullivan (Route 147) Bridge provides a gateway to the Town of West Springfield from Agawam. Benesch is working with MassDOT to redesign the roadway and heavily travelled bridge. The project also includes the reconstruction of three intersections at Routes 147/75/159, Route 147/Walnut Street/Walnut Street Extension and Route 147/River Street.

Scope: Benesch is adopting a "Complete Streets" approach for the project, which includes the design of a new 330-foot multi-span bridge. Roadway reconstruction will include 2500 feet of Route 147; 825 feet of Route 159 and 400 feet of Route 75. Services include field survey and base plan preparation (performed by Green Int'l), a Functional Design Report, Highway Design, Preliminary ROW, Environmental Permitting and Bridge Design, including a Preliminary Structures Report, Bridge Type Selection Worksheet and Sketch Plans. Layout and Easement Plans preparations will be performed by Green Int'l. Services also include utility relocation, coordination with MassDOT, and a public participation process.

Three traffic signals will be replaced at the referenced intersections. Additional turning lanes will be incorporated into the design at all intersections to increase vehicular capacity. Traffic signals will include ADA/AAB compliant crosswalks and signal clearances, emergency vehicle preemption and signal interconnections. Benesch is also providing horizontal and vertical realignment, storm drainage, stormwater management, and temporary traffic control plans.

Unique Features: The project area directly abuts the Eastern States Exposition—*Home of The Big E*—a regional fair which draws over one million visitors annually. The Route 75 portion of the project provides access to *Six Flags New England* to the south while the Route 147/River Road segment of the project is protected by the Benesch-designed *West Springfield Flood Protection System.*

Traffic Signal Improvements at Griswold Street / Harris Street & House Street | Glastonbury, CT

Key Issues
- Traffic Signal Design
- Traffic Engineering
- Utility Coordination
- Aesthetic Enhancements
- CTDOT Coordination & Project Expertise

Project Owner:
Stephen Braun
Assistant Town Engineer
Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033
stephen.braun@glastonbury-ct.gov

Start Date: 2013

Finish Date: 2015 – On-going

Firm Role: Prime

Entire Project Cost:
$1,000,000

Firm's Fee:
$30,000

Background: Alfred Benesch & Company is currently providing the Town of Glastonbury with engineering services for the design of traffic signal improvements related to the Griswold Street / Harris Street / House Street Intersection Improvement project.

Scope: The scope of work consists of preliminary engineering; preliminary, semi-final and final design; and technical specifications for the traffic signal installations associated with the reconstruction of the Griswold and House/Harris Streets intersection. The signal design will accommodate the proposed realignment of House Street opposite Harris Street and will include video detection, emergency vehicle pre-emption and interconnection with the intersection of Griswold Street at the Route 2 eastbound exit ramp.

Traffic signal design services encompassed a review of existing data and development of intersection capacity and queuing analyses for the intersection of Griswold Street and House/Harris Streets, along with the preparation of traffic flow diagrams.

Preliminary design services entailed the review of data and documents provided by the Town and CTDOT and field visits to identify critical control items. Benesch designed an interconnection and coordination scheme with the intersection of Griswold Street at Bantle Road and the Route 2 eastbound exit ramp. The scheme continues west along Griswold Street to the Naubuc School. Services also included evaluation of Maintenance and Protection of Traffic schemes; preparation of plans and supporting documentation for public meetings; quantity and cost estimates; report preparation; and attendance at coordination meetings with the Town, CTDOT, utilities and other agencies.

Benesch will also provide services during construction for the traffic signalization portion of the project. These services include meeting attendance; review of traffic signal and mast arm submittals; responding to Requests for Information; construction observation; final signal inspection; and preparation of record drawings.

Allen Street Roadway and Circulation Improvements

Springfield, MA

Key Issues

- Local Roadway Design
- Circulation Improvements
- Developed Numerous Design Alternatives
- Data Gathering
- Traffic Analyses
- Attendance at Stakeholder Meetings

Project Owner:
Christopher Cignoli, PE
Director of Public Works
City of Springfield
70 Tapley Street
Springfield, MA 01104
413-750-2808

Start Date: 2008

Finish Date: 2012

Firm Role: Prime

Entire Project Cost:
$2,500,000

Firm's Fee:
$1,322,000

Background: Allen Street and Bicentennial Highway are heavily travelled roadways in the City of Springfield. Located in the Sixteen Acres (Outer Belt) section of the city, the roadways are frequently congested and pose safety issues for local residents and commuters.

Scope: Benesch prepared planning and design documents for roadway and circulation improvements to the Allen Street and Bicentennial Highway Corridor.

The planning phase included significant data gathering, numerous stakeholder meetings, conceptual design and traffic analyses along the 3,000' project corridor to determine project scope, project impacts, traffic volumes and analyze existing traffic movements.

Benesch developed numerous alternatives in concert with the City of Springfield and the Outer Belt Civic Association to determine the ultimate solution that will address the ever growing traffic volumes, while also attempting to provide safety for area residents.

HERITAGE SURVEYS, INC.

Professional Surveyors and Engineers
241 College Highway & Clark Street - P. O. Box 1
Southampton, Massachusetts 01073-0001

Bruce A. Coombs, President
Professional Surveyor, MA, CT & VT
E-mail: bruce@heritagesurveys.com

Telephone (413) 527-3600
Facsimile (413) 527-8280
Website: heritagesurveys.com

GENERAL BACKGROUND INFORMATION

January 1, 2017

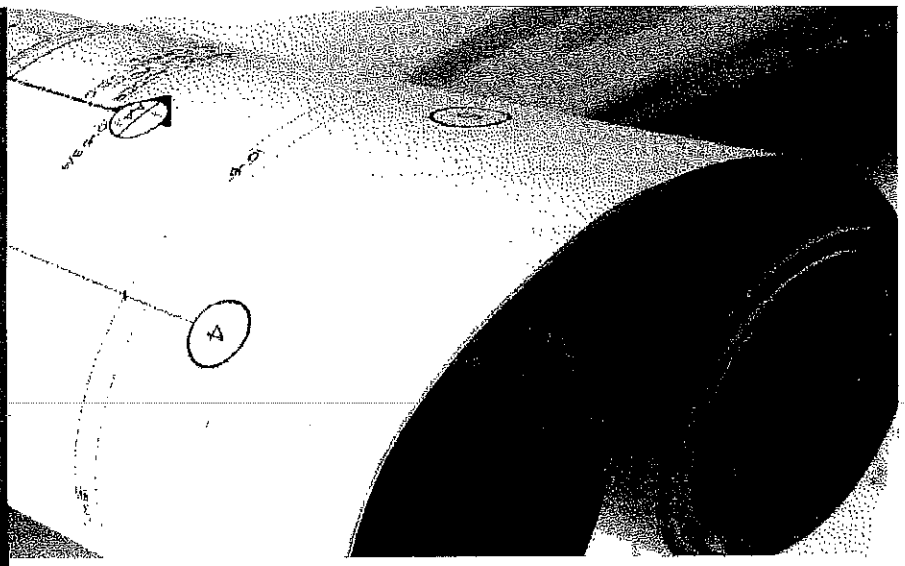
Heritage Surveys, Inc., was established as a Land Surveying firm in October 1975, and has grown from a few to approximately twenty five full time employees. The firm is located in a building at the corner of College Highway (Route 10), and Clark Street, in Southampton, MA. The building has been recently upgraded and expanded to approximately twice its original size, to accommodate a steady increase in growth of the surveying business. Some of the services provided include:

- Residential, Commercial, & Municipal Surveying and Engineering
- CAD design for Architects & Engineers
- Engineering design for Roadways, Subdivisions, and Individual Sites
- Mortgage, Title Insurance, & Land Court Surveys
- Deed Studies & Historical Research
- Soil Evaluation & Percolation Testing
- Wetland Identification and Permitting

Most of the 25 employees have worked at Heritage more than ten years, with several having more than 30 years of service. There is very little turnover of employees and many clients appreciate the continuity of service and the ability to work with the same persons over long periods of time. Building from an established base of information for individual projects often provides time and cost savings that would not otherwise be possible.

Heritage works cooperatively with other consultants and professionals working as architects, engineers, attorneys, landscape architects, foresters, photogrammetrists, and environmental professionals. Heritage will frequently pull together a team of professionals that they work with often, and will provide comprehensive supervision and coordination of all services for a particular project. In this way, Heritage is able to augment in-house capabilities with other professionals that are experienced and qualified in their areas of expertise.

Heritage has been on the leading edge of technological improvements since founded. It is one of the first firms to use and become proficient with AutoCAD and Softdesk computer software. For many years employees have been obtaining field measurements of angles and distances electronically, and downloading the data into a state of the art networked computer system. Extensive Windows NT based software used for the business operations of the company is interfaced with the surveying software for the free exchange of electronic mail and document text when required. Employees have undergone training courses in the use of field and office equipment, and regularly attend courses and seminars to keep abreast of the latest improvements. Heritage received several winning awards in the Cadastral Survey, Title Insurance Plan, and Engineering Site and Subdivision Plan categories, at the Massachusetts Association of Land Surveyors Conventions in recent years. Additional information can be found at the www.heritagesurveys.com



We are big enough to deliver...and small enough to care.

RDK AT A GLANCE:

Stability
In business since 1897

Superior Service
80 percent of business comes from return clients

Small firm responsiveness, large firm resources

Employees supported by firm--selected Best AE Firm to Work for by ***Building Design + Construction*** magazine

Financial Stability
RDK's recent Dun and Bradstreet rating was 3A1, the highest available rating related to financial strength, capacity and overall information collected on the Company

RDK ENGINEERS | FIRM PROFILE

RDK Engineers is a specialized mechanical and electrical engineering firm offering a spectrum of engineering services - total building systems solutions. We are one of the region's leading MEP specialty firms.

Firm Size:
Our 190+ member professional staff includes:

- Mechanical engineers
- Electrical engineers
- Plumbing engineers
- Fire protection engineers
- Audiovisual engineers
- Telecommunications engineers
- Commissioning/retro-commissioning engineers
- Energy engineers
- Project managers
- Technical/administrative support personnel

Market Sectors:

- Academic
- Commercial
- Government
- Historic and adaptive reuse
- Healthcare and hospitals
- Hotel and hospitality
- Industrial and manufacturing
- Municipal
- Residential
- Retail and mixed-use
- Science and high tech
- Transportation

Quality is Built Into Every Project We Design
Quality is not something that can be added on—it must be built in. It's the foundation of our organization. We don't just talk about quality—we invest in it. Our Chief Engineers, who ensure the quality of work in each of our disciplines, our extensive training programs, and our ISO 9001 2000 compliance program, are all evidence of our investment in building quality engineering into every project we undertake.

Practical Innovation/ Green Technologies
RDK's innovative designs incorporate the use of a wide variety of cutting edge, environmentally conscious technologies and methodologies. Nearly 20% of our staff members are LEED Accredited Professionals. RDK is also a corporate member of the U.S. Green Building Council.

RDK ENGINEERS

Andover | Amherst | Boston | Charlotte | Durham

www.rdkengineers.com

RDK ENGINEERS

CAPABILITIES
Engineering Services

As a full service MEP firm, RDK Engineers provides HVAC, electrical, plumbing, fire protection, telecommunications, security, audio-visual, commissioning, and energy and sustainability design services on a wide variety of buildings.

At RDK, we care about our clients and the superior quality of work that we provide. Rather than relying on preconceived solutions, we start by listening. What we hear and what we learn about our clients' unique requirements become the inspiration for our design.

HVAC
- Cogeneration
- Compressed Air Plants/Systems
- Construction Impairment Plan
- Ductwork and Piping Distribution Systems
- Energy Conservation including Heat Recovery
- Equipment Selection
- Fuel Cell Technology
- Fuel Oil Systems
- Geothermal
- HANSA Systems
- Heating and Cooling Systems
- Industrial Exhaust
- Infrastructure Master Planning
- Instruments and Controls
- Life Cycle Cost Analyses
- Mechanical Process and Manufacturing Equipment Facilities
- New and Renovated Central Plants, Efficiency Improvements and Plant Equipment Replacement
- NFPA 241 Plan
- Raised Access Floor (RAF) Systems
- Room Pressurization
- Specialized Humidification and Temperature Requirements
- Specialized systems design for medical procedure and labs
- System Analysis and Energy Studies
- Ventilation Systems

ELECTRICAL
- Auditorium/Theater Lighting and Audio Systems
- Carbon Monoxide/Dioxide Detection Systems
- Card Access Readers and Other Security Systems
- Emergency Generator Systems
- Emergency Power and Lighting Systems
- Fire Alarm and Detection Systems
- Intercom, Cable and Telephone Systems
- Interior and Exterior Lighting
- Nurse Call and Paging Systems
- Power Transmission/Distribution Systems
- Roadway and Parking Lot Lighting
- Solar/Photovoltaic Systems
- Sports Arena Lighting
- Substations

PLUMBING
- Acid Waste Neutralization Systems
- Compressed Air Systems
- Domestic and Process Water Systems
- Domestic Water Heating Systems
- Fountains
- Fuel Gas Piping Systems
- Grey Water Systems
- Laboratory and Medical Gas Systems
- Laboratory and Medical Vacuum Systems
- Medical Gas Systems
- RO/DI Systems
- Sanitary, storm and Process Drainage Systems
- Solar Thermal
- Special Waste Systems
- Vacuum Drainage Systems
- Vacuum Systems
- Water Conservation

FIRE PROTECTION
- AFFF Fire Suppression Systems
- Building Code Consulting
- Computer Room Fire Suppression Systems
- Construction Impairment Plan
- Fire Alarm/Detection/Suppression Systems
- Lightning Protection
- NFPA 241 Plan

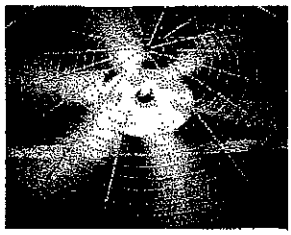
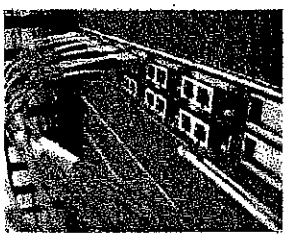
TELECOMMUNICATIONS
- Data Center Systems Design
- Feasibility Studies
- Intercom/Paging System design
- Low Voltage and Wireless Clock System Design
- PBX and Integrated Telephone System Design
- Telephone, Data, CATV Cabling & Infrastructure design
- Wireless System design

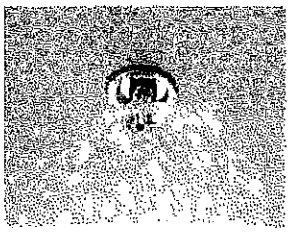
AUDIOVISUAL
- Audiovisual Infrastructure
- AV & IT/IP Integration
- Data Projection Systems
- Digital Signage
- Sound Reinforcement Systems
- Streaming Media Systems
- Systems Evaluation/Selection
- Video Systems
- Video/Audio Conferencing Systems

SECURITY
- Access Control Systems Design
- CCTV System Design
- Intrusion Detection System Design

COMMISSIONING
- Fundamental and LEED Enhanced Cx
- Troubleshooting

ENERGY & SUSTAINABILITY
- Dynamic Energy Modeling
- Energy & KPI Benchmarking
- LEED/WELL Administration
- Energy Code Consulting
- Sustainable Vision & Planning
- Renewable Energy Evaluation
- Customized Energy/Meter Analytics
- Utility Rebate/Incentive Assistance
- ASHRAE Energy Audits
- Life Cycle Cost Analysis (LCCA)
- Computational Fluid Dynamics (CFD)



Section 3 PROFESSIONAL PERSONNEL

Key to providing successful professional services is the quality and experience of the team of personnel proposed to work for the City. GZA considers the caliber of our team members to be our number one qualification.

Note that Thomas E. Jenkins, P.E., is GZA's proposed Project Manager and Principal-in-Charge and the prime contact for the City for all assignments. For the past 24 years, Tom has interfaced with the City on a regular basis and best understands the City's personnel, project deliverable expectations, and GZA team capabilities for each assignment.

Not only must individuals have the highest level of professional expertise, they must also be able to successfully collaborate in house as well as with the City. Most key individuals have in fact worked together for many years on numerous successful endeavors and know well the value of team participation toward the ultimate goal of a successful project and a pleased client.

Our personnel, as well as our firm as a whole, have a proven track record for interpreting, organizing, executing, budgeting, and coordinating assignments from the very complex to the basic. If selected, we will maintain this level of performance with a focus on communicating the findings and status of our technical services in a timely and concise manner.

Following are the resumes of those GZA individuals proposed to be assigned to work for the City of Springfield. Resumes of key individuals of GZA's proposed subconsultants are also included.

RESUME

Thomas E. Jenkins, P.E.

Associate Principal

Summary of Experience

Mr. Jenkins is a civil engineer who serves as an Associate Principal and engineer for GZA, with a focus on projects involving natural and water resource protection, development, and restoration. His extensive background has provided both design and construction experience, with wide exposure to all aspects of civil engineering. This experience record has included the design and construction of commercial, industrial and municipal infrastructure systems and their respective components, especially for water conveyance. Other significant project experience includes dam reconstruction especially historic restoration, levee investigations, channel stabilization and improvement works, flood control facilities, freshwater dredging, stormwater systems, water supply facilities, and in-lake recreational structures.

Relevant Project Experience

Principal Engineer, Camp STAR Angelina, Springfield, Massachusetts. GZA provided site civil engineering and landscape architectural services for the development of the new swimming pool, bathhouse, and camp infrastructure project, completed in 2015. The swimming pool includes a zero entry interface for full accessibility along with multiple waterspray play features interspersed throughout the shallow end. Site development elements include multiple rain gardens and other low impact development practices, water distribution systems for fire protection and domestic supply, sanitary sewage collection and pumping station, new electrical infrastructure for the camp, site lighting, and communications. In addition to the rain gardens, landscape elements include accessible parking and walkways, outdoor seating, picnic grove, and grass pavers for intermittent vehicular access to the bathhouse. The $1.8M project was funded by the Commonwealth of Massachusetts through the state's Signature Urban Park Program, numerous community businesses, parents and friends of Camp STAR Angelina, and the Springfield Council for Cultural and Community Affairs. Camp STAR Angelina offers inclusive recreational programs for youth and young adults (ages 3-22) with and without disabilities.

Principal Engineer, Remembrance Garden within Forest Park, Springfield, Massachusetts. Landscape improvements, plantings, and signage commemorating the 1916 Easter Rising of the Irish Volunteers and the Irish Citizen Army. The park improvements included accessible walking trails, seating, and tributes patterned after the Garden of Remembrance in Dublin, Ireland.

Principal Engineer, Development of North Riverfront Park, Springfield, Massachusetts. This new municipal park is located on the shores of the Connecticut River with a direct connection to the Connecticut River Walk and Bikeway. The passive recreation park is adjacent to City property leased by the Pioneer Valley Riverfront Club, a center for rowing, kayaking, canoeing, dragon-boat paddling and biking on the river. The project includes a fitness trail with exercise stations along Riverside Road and the River Walk. GZA's accessible designs feature a new gazebo, trellis overlook adjacent to the river, site lighting, open lawn and turf areas, plantings, benches and picnic tables, and landscape irrigation. Paving was reduced to minimize development impacts and low impact development stormwater management was employed throughout. GZA coordinated closely with the U.S. Army Corps of Engineers to obtain Section 408 approval to modify the adjacent federal flood control

Education

B.S., 1982, Civil Engineering,
Georgia Institute of Technology

Registrations & Certificates

2001, Connecticut,
Professional Engineer, # 22349
1992, Massachusetts,
Professional Engineer, # 36450

Affiliations

- American Society of Civil Engineers
- Boston Society of Civil Engineers
- Association of State Dam Safety Officials
- North American Lakes Management Society

Areas of Specialization

- Municipal Park Planning & Development
- Land Development
- Freshwater Hydraulic Dredging
- Freshwater Mechanical Dredging
- Stormwater Management
- Hydrologic/Hydraulic Modeling
- Flood Control and Protection
- Historic Dam Restoration
- Water Resources Engineering
- Construction Cost Estimation

Thomas E. Jenkins, P.E.

Associate Principal

works to allow for the connecting ramps to the River Walk and Bikeway atop the Connecticut River levees.

Principal Engineer, Redevelopment of Nathan Bill Park, Springfield, Massachusetts. This park redevelopment project was partially funded by a Community Development Block Grant and featured new parking facilities, a new waterspray playground, improved picnic and pedestrian facilities, rehabilitated basketball courts and tennis courts, irrigation through-out the multi-ballfield park, and a new walking trail providing a 3,000 linear foot loop around the neighborhood park. In addition to the site civil and landscape design services, GZA pro-vided the services of our Licensed Site Professional to allow for construction within an Activities Use Limitation regarding portions of the park previously impacted by solid waste disposal.

Principal Engineer, Restoration of Hydropower at Watershops Pond Dam, City of Springfield, Massachusetts. Mr. Jenkins led this effort to evaluate the technical and financial feasibility of restoring hydropower at this historic municipally-owned structure. In the late 18th century, the U.S. Federal government established the Springfield Armory and began producing muskets, with forging of metal and shaping of wooden stocks taking place at "the Watershops" on the Mill River and the lighter assembly work occurring at the nearby "Hill Shops". The current Watershops Pond Dam was constructed mid-19th century, with hydroelectric power being added in the 1920s. The Armory was decommissioned in 1968 and the City of Springfield assumed ownership of the dam. The proposed hydropower project will assist Springfield in reaching its goals of becoming a greener and more resilient city and will provide clean, renewable energy to the nearby new Elias Brookings School on an everyday basis.

Principal Engineer, New Outdoor Amphitheater at Camp STAR Angelina, Springfield, Massachusetts. GZA provided site and landscape design services and permitting for a new outdoor amphitheater providing intimate seating for up to 200 guests. The amphitheater is fully accessible and inclined walkways provide accessible routes to all three of its levels, surrounding an open fire pit and performance stage. Landscaping features include plantings, site lighting, and pedestrian walkways.

Principal Engineer, Development of Mary Troy Park, Springfield, Massachusetts. GZA provided site civil engineering and landscape architectural design services for this new municipal park, funded through the Commonwealth of Massachusetts Parkland Acquisitions and Renovations for Communities (PARC) grant program in combination with Community Development Block Grant funds. The project redeveloped a vacant brownfields lot into a new neighborhood park adjacent to a new senior center and offers a variety of recreational opportunities to meet the diverse needs of the neighborhood. Site improvements are universally designed to provide engaging features for people of all ages and abilities and exceed ADA accessibility requirements. A series of freestanding play structures and exercise equipment positioned along a central pathway and within pockets encompassed by paved travel lanes allow users to actively engage in recreational amenities within the park. Each pocket area has either a wood fiber or rubberized safety surface that meets safety and accessibility standards. Additional amenities, such as a drinking fountain, trash receptacles, bike rack, benches and LED site lighting aid patrons in their use of the park. Park improvements include a patio area with picnic tables and gaming stations, eight park benches, a sensory garden planting, a waterspray splash pad, playground unit (ages 2-5 year olds), swing set, a fit course, lawn areas, new sidewalks, and new lighting. New plantings throughout the park include a variety of dogwoods, crabapple, honey locust, tulip poplar, ginkgo biloba, and a variety of shrubs and perennials (roses, rhododendron, boxwoods, etc.).

Senior Project Engineer and Consultant/Reviewer, Flood Control Works, Floodwall Repair Project, Chicopee, Massachusetts. Developed contract plans and specifications to reconstruct deteriorated portions of the existing floodwalls that exhibit surface and deep delamination, structural cracking, and the need for expansion joint resealing. Work also includes modifications to an existing bridge to allow for the decommissioning of a stop log closure structure, thus facilitating flood control operations and significantly reducing maintenance requirements.

Principal Engineer, Rehabilitation of Benedict Pond Dam, Great Barrington, Massachusetts. Benedict Pond Dam was originally constructed by the CCC in the 1930s and is located within Beartown State Forest in Great Barrington. This project addressed deficiencies at the dam in order to raise the condition of the dam to from Very Poor to Good. The dam rehabilitation project included: reconstruction of The 530±foot long concrete masonry dam; raising the elevation of the top of dam to increase spillway capacity to accommodate the Design Flood; removal of large trees and regrading of the earthen embankment sections; replacement of the original spillway walkway with a new handicap-accessible walkway;

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replacement of the low-level outlet slide gate and controls; and relining of the low-level outlet pipe.

Principal Engineer, New Elias Brookings School, Springfield, Massachusetts. Mr. Jenkins was lead engineer and project manager for all site environmental, geotechnical, civil engineering, and landscape design for this new $22M elementary school in an urban setting. Site design included all utilities, grading and earthwork, parking and bus circulation, playfields, play structures, school garden, extensive site retaining walls, and pedestrian circulation and plaza areas. Due to the site's urban history, GZA provided direction to the City in proceeding with an early site preparation program to remove, condition, and replace 5,000 CY of environmentally-impacted urban fill prior to releasing the project for general bids. The old Brookings school was destroyed by a June, 2011, tornado. Under Mr. Jenkins' direction, GZA also performed rapid deployment geotechnical and site civil engineering services to help the City of Springfield establish a new 45,000 sq.ft. temporary school facility open within 12 weeks of the tornado.

Senior Project Engineer and Consultant/Reviewer, Environmental Permitting for Repairs to Connecticut and Chicopee River Flood Control Works, Chicopee, Massachusetts. Coordinated with the Corps of Engineers, Massachusetts Natural Heritage and Endangered Species Program, and MADEP regarding proposed deficiency corrections along the flood control works of two significant river flood protection works involving four separate systems.

Senior Project Engineer and Consultant/Reviewer, Contract Plans and Specifications for Maintenance Deficiency Corrections, Chicopee, Massachusetts. Developed construction contract plans and specifications for maintenance deficiency corrections along the seven miles of USACE-constructed flood control works within the in the USACE Rehabilitation and Inspection Program (RIP). Provided full time construction monitoring during the correction program.

Principal Engineer, Dryden School, Springfield, Massachusetts. Dryden School was heavily damaged by the June, 2011, tornado in Springfield. GZA provided all geotechnical, site civil engineering, and landscape design for the $12M repair and additions to this elementary school. Site design included all utilities, grading and earthwork, parking and bus circulation, landscaping, and pedestrian circulation and plaza areas.

Principal Engineer, New Public Works Facility, Bridgeport, Connecticut. GZA provided the City of Bridgeport with geotechnical and site civil engineering for their new 20,000 sq.ft. public works garage located on City-owned land in an urban setting. GZA provided all geotechnical, site civil engineering, and landscape design including all utilities, grading and earthwork, parking and vehicular circulation, landscaping, and pedestrian access.

Principal Engineer, 118-122 Elm Street, Enfield, Connecticut. Provided site design and planning and zoning permitting services for a 7,800 SF retail building on a 0.89-acre parcel. Project tasks included layout of building and facility parking, site grading, stormwater management, utility coordination, sediment and erosion control, and landscape architecture. The project included a high-level stormwater overflow connection to a CTDOT-owned stormdrain.

Senior Project Engineer, Hadley Corner Retail Center, Hadley, Massachusetts. Mr. Jenkins was the site design civil engineer for this 325,000 SF retail development complex along busy Route 9 in Hadley, Massachusetts, in close proximity to Amherst, MA, and the University of Massachusetts. The designs included approximately 5,200 LF of single- and multi-lane circulatory roads, over 1,800 parking spaces, and complete site utilities and stormwater management systems in full compliance with the MA Department of Environmental Protection's Stormwater Management Policy. The facility water infrastructure included approximately 6,000 LF of 12" ductile iron main, and multiple domestic and fire service lines. Two live connections to the adjacent municipal water supply within Route 9 and Maple Street were also included, along with above-grade master metering and backflow prevention.

Principal Engineer, Rehabilitation of Dean Pond Dam, Brimfield, Massachusetts. Dean Pond Dam is located within Brimfield State Forest and is owned and operated by the Massachusetts Department of Conservation and Recreation. This project made significant improvements to the earthen embankment dam to address numerous conditional deficiencies. The rehabilitation project included select demolition, repair of the low level outlet slide gate and replacement of the controls, installation of a new trash rack, masonry repairs along the spillway training walls and spillway steps, and regrading of the crest and slopes of the dam.

Principal Engineer, Church Street Culvert Improvement Project, Milford, Massachusetts. Mr. Jenkins led a multi-

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disciplinary team of professionals in the design and permitting of this sensitive culvert replacement project in a dense urban environment. The Project included a Hazard Mitigation Grant application to the Massachusetts Emergency Management Agency, including a detailed Benefit Cost Analysis. The project was successfully completed using 75% FEMA funding applicable to design, permitting, and construction costs.

Senior Project Engineer and Consultant/Reviewer, Comprehensive Inspection, Chicopee, Massachusetts. Participated in the field review of all earthen levees, flood walls, stop log, and pump stations as well as investigations into toe drains, and gate controlled outfalls throughout the four flood control systems within the City of Chicopee. Provided internal review of draft and final reports. Documentation of findings was based upon the USACE Flood Damage Reduction System Inspection Report standardized forms.

Senior Project Engineer and Consultant/Reviewer, FEMA Accreditation Submission, Chicopee, Massachusetts. Mr. Jenkins has been integrally involved in the overall planning and coordination of the civil, geotechnical, and structural evaluation of the four Chicopee flood control systems for submission to FEMA accreditation. Mr. Jenkins has managed the hydrology and hydraulics analyses of the accreditation submission, including internal flooding analyses for eight pumping stations, wave runup and overtopping potential, and velocity and scour analyses.

Environmental Impact Evaluation for Expansion of Somers Prison, Somers, Connecticut. Mr. Jenkins prepared the stormwater section of the EIE and developed a conceptual stormwater management plan to accommodate additional impervious surface area created by a proposed 720-bed facility and associated parking.

Principal, NPDES Phase II Small MS4 Stormwater General Permit Compliance, Milford, Massachusetts. The Town of Milford contracted GZA early in the 5-year permit term of the *2003 General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)* to provide assistance with permit compliance. Mr. Jenkins supervised the preparation of the on-going Stormwater Assessment Program designed by GZA for the Town, and provided quality assurance and control for all aspects of the Program.

Devens Community Stormwater Management Program, Devens, Massachusetts. Mr. Jenkins served as Project Manager and Engineer for this 1.2 million stormwater management program for the Devens planned community or the reuse of Fort Devens Military base. The project included eight regional stormwater management basins designed to address past drainage problems and to compensate for the re-development of Fort Devens. Also included were program components to address environmental degradation caused by past indiscriminate practices at the base.

Senior Project Engineer, Freshwater Pond and Park Restoration Program, Enfield, Connecticut. This project included the dredging of 37,000 CY of accumulated sediments, pedestrian boardwalks and paved walkways, fishing pier, access points for winter activities, landscaping, and structured and hydraulic modifications to the freshwater pond dam.

Silver Lake Dredging Project, Meriden/Berlin, Connecticut. Mr. Jenkins is the Project Manager of the largest inland hydraulic dredging project in New England. Under the direction of the Connecticut Department of Environmental Protection, Mr. Jenkins developed design plans and specifications for the dredging of 600,000 cubic yards of sediment to implement the restoration of this State-owned recreational waterbody.

Project Engineer, Restoration of Nashawannuck Pond, Easthampton, Massachusetts. Conducted base investigations and prepared preliminary designs for the aquatic habitat restoration program in compliance with U.S. Army Corps of Engineers criteria for their Section 206 Aquatic Habitat Restoration funding program. Developed feasibility study and alternatives analysis for different dredging methodologies and sediment dewatering and disposal schemes. Prepared a detailed project report and Environmental Assessment under NEPA. Led the local and state permitting for the final project prior to its construction in 2009-2010.

Senior Project Engineer, Harriman-West Airport Runway Reconstruction, Wetland Mitigation Design, Construction Observation, North Adams and Williamstown, Massachusetts. Prepared narrative sections for NEPA/MEPA documentation in support of runway, taxiway, and infrastructure reconstruction, including preliminary designs for wetland mitigation and establishment of a relocated perennial stream. The new runway safety areas impacted nearly two acres of wetland. Mr. Jenkins provided engineering design and analysis for the 3-acre wetland mitigation area, with 1200 linear feet of constructed stream channel and a water cascade feature to provide grade control

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Associate Principal

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Senior Project Engineer, Expansion of Facilities at the Northampton Airport, Northampton, Massachusetts. Design engineer for the airport improvement plan including the construction of two open hangar buildings, 34 new T-hangars, relocation of the FBO, and associated taxiway and apron improvements. As this airport is entirely located within the FEMA-designated 100-year floodplain of the Connecticut River, site grading was critical, as no net loss of floodplain storage was possible. The stormwater management design for the airport improvements included low impact development (LID) techniques to maintain and enhance the pre-development hydrologic regime of the facility

Principal Engineer, Restoration of Milford Pond, Milford, Massachusetts. Conducted base investigations and prepared preliminary designs for the restoration of the 120-acre Milford Pond on the Charles River in Milford, MA. Developed feasibility study and alternatives analysis for different dredging methodologies and sediment dewatering and disposal schemes in compliance with U.S. Army Corps of Engineers criteria for their Section 206 Aquatic Habitat Restoration funding program. Prepared a detailed project report and Environmental Assessment under NEPA. Designed a watershed-based stormwater management plan consisting of the retrofit of stormwater BMPs within the municipal drainage system and the establishment of stormwater water quality basins and constructed wetlands.

Senior Project Engineer and Consultant/Reviewer, New Bedford Regional Airport Industrial Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention Control and Countermeasure Plan (SPCC), New Bedford, Massachusetts. Supervised and provided technical review of the preparation of Industrial SWPPP to comply with EPA NPDES requirements for New Bedford Regional Airport and assisted in SPCC preparation. Project included field review, record review, interviews and stormwater drainage system review, documentation of existing conditions, sediment and erosion control BMP concepts for project site with fine soils likely to require significant BMPs, including use of flocculents, SWPPP preparation, and SPCC assistance.

Senior Project Engineer and Consultant/Reviewer, SWPPP and SPCC Plan for Beverly Municipal Airport, Beverly, Massachusetts. Supervised and provided technical review of the development of a SWPPP for the Beverly Municipal Airport, including field investigation and mapping of stormwater systems, materials inventory, tenant interviews, and document preparation. Provided support on SPCC Plan development.

Project Engineer, Town of Wellesley Stormwater Master Plan Update, Wellesley, Massachusetts. Developed a Town-wide stormwater model, using XP-SWMM software. This work included field observation of over 15 miles of stream corridor and associated stormwater features, water quality sampling and data analysis, and stormwater modeling. This project generated a town-wide model for system capacity and water quality impacts analysis. Based on the model results and field observations, recommendations for system improvements were made.

Senior Project Engineer, Gateway Center Retail Development, Everett, Massachusetts. This project's site design required a sewer pump station and construction of a water distribution main through a tunnel beneath active railroad tracks. The site's complete water distribution system for fire protection and domestic use included approximately 9,000 LF of 8"-12" ductile iron pipe with associated valving, branching, hydrants, and other appurtenances. The site stormwater management facilities included detention basins with created wetlands for water quality treatment and hydrodynamic particle separators for enhanced sediment removal. The site fill requirements resulted in numerous retaining walls at the periphery of the project. The design of the site was constrained by the Activities and Use Limitations (AULs) resulting from the site remediation process. The AULs required that the ultimate development of the site provide a minimum of 6 feet of fill above a "marker layer" which denoted the limit of remediated soils.

Principal Engineer, Western Connecticut State University Master Plan EIE, Stormwater Master Plan, and STC Permit, Danbury, Connecticut. Reviewed EIE, conducted field review of stormwater system and campus layouts, reviewed drainage sections for STC permit and supervised and participated in preparation of Stormwater Master Plan for University and CT DPW use in obtaining Flood Management Certification for Master Planning activities. Worked as part of a multi-disciplinary team to identify existing issues at the campuses and outline potential impacts of proposed future Master Plan development. Stormwater Master Plan required compiling historic drainage plans, conducting field review to observe system, and preparing hydrologic watershed level modeling for two campuses, looking at past, present, and proposed future conditions to present need for detention and stormwater treatment as part of future development.

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Principal Engineer, Emmett O'Brien (EOB) Technical High School Drainage Study, Ansonia, Connecticut. Provided oversight for team of engineers and scientists for this project which was a study to review potential causes of erosion downstream of stormwater outfall from EOB School. Project included field review; review of deeds and easements, stormwater system plans, current and historical complaints; interviews with City staff and residents; and watershed documentation. Next phase of project included development of conceptual solutions to address existing erosion and prevent future damage.

Principal Engineer, Central Connecticut State University (CCSU) Dining Hall Stormwater Review, New Britain, Connecticut. Provided oversight for project which included SW peer review of an engineering firm's initial SW design, recommendations for and coordination with Client and Engineer on potential rain garden design and location, and providing regulatory guidance to Engineer.

Stormwater Management By-Law, Town of Milford, Massachusetts. Mr. Jenkins served as Senior Project Manager and lead engineer and author of Article 36 of the General By-Laws of the Town of Milford: "Stormwater Management By-Law", approved by the Massachusetts Attorney General on February 9, 2006. The by-law addresses design standards, municipal review procedures, sediment and erosion control, prohibited discharges, enforcement, and penalties and has been successfully employed by the Town of Milford for over ten years.

Project Engineer, CT Department of Correction MS4 Permit Assistance, Various towns, Connecticut. Prepared registrations for six correctional facilities under CT MS4 permit and prepared Draft Stormwater Management Plan. Project will also include written IDDE Plan development, inventory of outfalls and interconnections, mapping, DCIA calculations, and other aspects of compliance.

Mr. Jenkins has served as lead engineer and manager on numerous projects involving floodway determination and floodplain analysis using HEC-2, WSP2, and HEC-RAS. He has over twenty years' experience in watershed and stormwater system modeling with TR-20 and HydroCAD®. Mr. Jenkins has recently led the preparation of several Emergency Action Plans (EAPs) for high hazard dams, including dam break modeling and unsteady flow analysis, using HEC-RAS, HEC-GeoRAS, and HEC-HMS. Currently, he is modeling the potential conversion of two-thousand feet of urban perennial stream, converting a closed conduit drainage system into a fully functioning riparian corridor providing enhanced wildlife benefits and aesthetic appeal for a developing municipal parkland setting.

As Associate Principal, Mr. Jenkins has worked closely with the municipal, state, and federal agencies in major water resources projects. He has led design and permitting teams for numerous commercial and municipal dredging and drainage projects. Currently, he is the Principal-in-Charge for the hydraulic dredging of Silver Lake in Berlin and Meriden, for Connecticut DEEP, the largest on-going freshwater hydraulic dredging project in New England. Mr. Jenkins was also involved in the study and preparation of the dredging feasibility study and environmental assessment for Milford Pond in Milford, as well as the on-going pond restoration project in Easthampton for the Corps of Engineers, and has designed and managed numerous dredging projects in Massachusetts and Connecticut.

Mr. Jenkins works closely with the public agencies on a variety of projects. He was the design engineer and project manager for the preservation and restoration of the historic marble dam at Natural Bridge State Park in North Adams, a structure featured in the writings of Nathanial Hawthorne. Resulting from that project, his paper on the use of ground penetrating radar to determine the cross-sectional geometry of the historic dam was presented at the 5th International GPR Conference in Kitchener, Ontario. Mr. Jenkins was the project engineer for the reconstruction of Mill Pond Dam in Springfield, MA, a 300-year old structure that is believed to be the oldest dam in Hampden County still in operation.

RESUME

Paul G. Davis, PhD, PWS, CPSS, CERP

Principal Environmental Scientist

Summary of Experience

Dr. Paul Davis serves as a Principal for GZA as well as the Principal Environmental Scientist for the Springfield, Massachusetts Office, where he has worked since 1986. Dr. Davis has over 30 years of experience with wetland and aquatic resource assessment, ecological restoration, mitigation design and permitting. His assignments include overall management and responsibility for the environmental staff in the GZA Springfield office and individual project responsibility for planning, coordination and implementation of various projects for which he is technical lead. Dr. Davis also serves as Technical Practice and Marketing Lead within GZA for natural resource and ecological services, networking and helping to develop the skills of over 30 professional scientists. His broad knowledge of many technical disciplines has facilitated successful management of many complex, large-scale interdisciplinary projects. These projects encompass a wide diversity of wetland and aquatic resource affected projects, and their permitting processes at the local, state and federal levels, including highway, rail, airport, utility, retail development, facility construction, recreation, natural resource management, and site remediation projects. Dr. Davis has previously worked as an oceanographer with the National Oceanic and Atmospheric Administration (NOAA) and as technical staff to the Merchant Marine and Fisheries Committee for the U.S. House of Representatives.

Relevant Project Experience

Principal Environmental Scientist, Water Resource Management Study for 18 Lakes and Ponds in Springfield, Massachusetts. For the City of Springfield Parks and Recreation Department, GZA undertook a three-year study to provide a summary and update of the biological and limnological conditions of 27 lakes and ponds within the City limits, assessing the biological conditions, state of eutrophication, sources of pollution and contamination, and making long-term and short-term management recommendations for the City as part of their recreational priorities.

Principal Environmental Scientist, Aquatic Plant Management in Springfield Park Ponds, Springfield, Massachusetts. Lead the environmental evaluation team in the analysis and permitting for aquatic plant management of five lakes and ponds within Forest Park in Springfield, MA. Herbicide treatment was determined to be a necessary part of the management plan and permits were obtained through DEP in support of this project. Annual monitoring and permit compliance is performed on this project since 2000, including permit renewals and documentation of vegetative changes to the aquatic and limnetic communities.

Principal Environmental Scientist, Casino & Resort Environmental Design, Assessment & Permitting, Everett, Massachusetts. Natural resource analysis, mitigation design and MEPA permitting for the proposed casino and resort located in Everett MA along the tidal Mystic River. Conducted natural resource inventories and prepared sections for MEPA documentation (Expanded ENF) in support of project development, assessment of impacts associated with shoreline development and dredging, including Living Shoreline mitigation (saltmarsh and coastal bank restoration), and oyster and soft-shell clam restoration, and Essential Fish Habitat (EFH) Assessment.

Education

B.S., Zoology, University of Massachusetts
M.S., Zoology, University of Rhode Island
M.M.A., Marine & Environmental Policy, University of Rhode Island
Ph.D., Biological Studies, University of Rhode Island

Registrations & Certificates

Professional Wetland Scientist, Cert. #00356
Certified Professional Soil Scientist, Cert. #24837
Certified Ecological Restoration Practitioner, pending
Registry of Soil Scientists, SSSSNE

Affiliations

- Society of Ecological Restoration, Committee on Certification
- Society of Wetland Scientists
- Soil Science Society of America
- North American Lake Management Society
- Association of Massachusetts Wetland Scientists, Founding Member
- Massachusetts Airport Management Association, Environmental Regulatory Committee
- Board of Trustees & Visiting Professor for Environmental Sciences, American University of the Caribbean, Les Cayes, Haiti

Areas of Specialization

- Aquatic & Wetland Science
- Soil Science
- Ecological Restoration
- Wetland Mitigation Design
- Water Quality Analysis
- Ecology
- Marine Science & Limnology
- Microbiology
- Zoology
- Statistical Analysis

RESUME

Paul G. Davis, Ph.D., PWS, CPSS

Principal Environmental Scientist

Principal-in-Charge and Principal Environmental Scientist, Westfield-Barnes Municipal Airport, Runway Reconstruction, NEPA/MEPA Compliance, Vegetation Management Plan, and Rare Species Master Plan, Westfield, Massachusetts. Natural resource analysis, mitigation design and permitting for the municipal airport in Westfield, MA, which is also home to the National Guard. Prepared natural resource inventories and prepared sections for NEPA/MEPA documentation in support of runway and taxiway reconstruction, new terminal building. Developed, permitted and monitored comprehensive vegetation management plan for airport including multiple acres of wetland and rare species habitat impact. Implemented Conservation and Management Plan for airport for rare species. Critical issues addressed impacts to rare species (lepidopterans and grasshopper sparrow). Overseeing surveys and preparing Master Plan approach for rare species habitat for benefit of airport future projects.

Principal-in-Charge and Principal Environmental Scientist, Harriman-West Airport Runway Reconstruction, NEPA/MEPA Environmental Assessment and Wetlands Variance Permitting, Wetland Mitigation Design, Construction Observation, North Adams and Williamstown, Massachusetts. Natural resource analysis, mitigation design and permitting for the municipal airport in North Adams, MA. Prepared natural resource inventories and prepared sections for NEPA/MEPA documentation in support of runway, taxiway, and infrastructure reconstruction. For runway safety areas impacts of 1.5± acres of wetland requiring MA DEP wetland variance, designed and provided construction and 5-year monitoring for a 3± acre wetland mitigation area with 1200 LF of stream and a cascade feature. Developed, permitted and monitored comprehensive vegetation management plan for airport in two towns, including multiple acres of wetland.

Principal Environmental Scientist, Removal of Upper Roberts Meadow Dam and Trout Stream Restoration, Northampton, Massachusetts. In support of the proposed removal of this dam segmenting a high quality trout stream, performed environmental analysis of the pond and stream habitats, prepared a mitigation strategy and plan, and prepared MEPA documentation and wetland permitting information. Conducted public meetings and seminar presentation in support of project.

Principal Environmental Scientist, Lost Lake Salt Marsh Restoration Evaluation & Impact Assessment, Guilford, Connecticut. Performed the environmental evaluations for CTDOT and CTDEEP relative to reconstruction of a highway bridge and removal of tidal flow restriction for the purposes of salt marsh restoration in 60± acre flooded former saltmarsh. Evaluations included an inventory of subaqueous soils, existing flora/fauna biodiversity, including documentation of existing salt marsh fringe areas, as well as assessment of potential for successful saltmarsh restoration.

Principal and Lead Environmental Scientist, Wetland Permitting for I-84 Reconstruction, Waterbury, Connecticut. Managed and lead scientific team in wetland and watercourse delineation & evaluation for a 3.5-mile section of I-84. Identified, evaluated, and assessed potential impacts to natural resource elements included wetlands functions & values, aquatic resources (streams and rivers), water quality, and habitat corridors. Work involved evaluation and mitigation of impacts associated with 11 bridge crossings, prior dam removal, and river realignment along portions of the Mad River and Beaver Pond Brook including 3± acres of wetland mitigation design. Permits were prepared and successfully completed with CT DEEP and the Army Corps of Engineers.

Principal and Lead Wetlands Scientist, James Pond Parcel Wetlands Delineation and Assessment, Exeter, Rhode Island. Wetland scientist project leaders, delineating a 1000± estate parcel in Exeter Rhode Island with 65,000± LF of wetland boundary. Identified different wetland and waterbody ecotypes. Prepared field maps, data forms, and assisted in the conduct of an ecological habitat assessment, identifying wetland functions and values.

Principal Environmental Scientist, Connecticut Department of Transportation, Wetland Mitigation Site Monitoring, Brookfield, Connecticut. As part of the CT DOT on-call wetlands contract with the Office of Environmental Planning, Dr. Davis implemented the multi-year mitigation site monitoring and invasive species control efforts for these 6 different wetland and upland habitat mitigation sites.

RESUME

Nathaniel L. Russell, P.E.

Senior Project Manager/Civil & Geotechnical Engineer

Summary of Experience

Mr. Russell is a Project Manager and geotechnical engineer at GZA. His experience includes Geotechnical Engineering and Design, Site Investigations, Landfill Design and Permitting, Stormwater / ESCP Design and Permitting, Wetland Permitting, Environmental Remediation / Brownfields Redevelopment, Alternative Energy Site Development, Project Management, Construction Management / Construction Quality Assurance, and Litigation Support.

Relevant Project Experience

Geotechnical Engineer, North Riverfront Park, Springfield, Massachusetts. Mr. Russell led the geotechnical evaluation of a proposed ramp on the levee system sideslope for access to an existing bike path and design of site retaining walls and building foundations. The project involves construction of new retaining walls and placement of fill over the riverside slope of a levee that is an integral part of the City of Springfield's flood control system. As part of the project GZA obtained Section 408 approval from the USACE.

Civil & Geotechnical Engineer, Woods Hole Ferry Terminal Reconstruction, Falmouth, Massachusetts. GZA is providing extensive engineering support to the Steamship Authority for the +$100-million reconstruction of Woods Hole Ferry Terminal and relocation of their administrative offices to an off-site location. Mr. Russell is managing GZA's civil engineering services for design and permitting of the phased reconstruction of the Ferry Terminal, including replacement of all three slips, the terminal building, a new storage building, new MassDEP compliant stormwater management system, new utility services (water, electric, communications and sanitary sewer) and associated infrastructure improvements.

As part of the project, the GZA assisted with the civil and geotechnical design for SSA's new 20,000-sf administrative office building and temporary terminal (both under construction) to relocate their administrative services and operational personnel (currently housed in the existing Terminal Building that is to be demolished in Winter 2017/2018). Mr. Russell is providing ongoing engineering support during the construction.

Mr. Russell also assisted with the permitting of the project with local, state and federal regulators, including filing a wetlands Notice of Intent (NOI), Chapter 91 license and Section 401 Water Quality Certification.

Geotechnical Engineer, Integrated Design Building, University of Massachusetts, Amherst, Amherst, Massachusetts. Mr. Russell provided geotechnical services during construction of the Integrated Design Building on the University of Massachusetts' flagship campus. Mr. Russell reviewed submittals and requests for information, met with the owner's representative and their testing agency to review subsurface conditions encountered during construction of the building foundation and provided technical guidance during construction.

Geotechnical Engineer, Taconic High School, Pittsfield, Massachusetts. Mr. Russell provided geotechnical services during design and construction of the City of Pittsfield's new technical high school. Mr. Russell reviewed submittals and requests for

Education

B.S., 2003, Civil Engineering, Lehigh University
M.S., 2006, Geotechnical Engineering, University of California

Registrations & Certificates

2008, Professional Engineer, Massachusetts, #47719
2014, Professional Engineer, Connecticut, #PEN.0030556
2016, Professional Engineer, Vermont, 018.0117996
2016, Professional Engineer, New York, #096236
Nuclear Density Gauge Certified 49 CFR 172 (H)
OSHA 40-Hour Trained
OSHA 10-Hour Trained
OSHA 8-Hour Supervisor Trained
MA Solid Waste Facility Third Party Inspector TIPX263211

Affiliations

- Member, American Society of Civil Engineers (ASCE/G-I)

Areas of Specialization

- Geotechnical Engineering
- Civil Engineering
- Subsurface Investigations
- Solid Waste Management
- Construction Monitoring
- Construction Management
- Stormwater Management
- Environmental Permitting

Nathaniel L. Russell, P.E.
Senior Project Manager/Geotechnical Engineer

information, met with the owner's representative and their testing agency to review subsurface conditions encountered during construction of the building foundation and provided technical guidance during construction. Mr. Russell oversaw GZA's field services during construction, including managing on-site staff and providing on-call support to junior engineers.

Civil & Geotechnical Engineer, TPC River Highlands Golf Course, Cromwell, Connecticut. Mr. Russell leads GZA's project team providing engineering and permitting support to the PGA TOUR's redevelopment of the TPC River Highlands Golf Course, a PGA Tour Championship level golf course. The phased project is being undertaken by the PGA to enhance the aesthetics and playability of the golf course, repair and replace aging infrastructure that had reached the end of its service life, and reconstruct the existing clubhouse building.

GZA's services have included civil and geotechnical engineering, wetland, environmental and stormwater permitting and representation at public meetings. GZA worked with the PGA to design and permit the course redevelopment portion of the project on an accelerated timeline allowing the PGA to meet their required construction schedule (ability to initiate construction in Fall 2015 with completion in the spring of 2016 prior to the Traveler's Championship). GZA successfully permitted the project with USACE, CT DEEP, and the Town of Cromwell (IWWA and Planning and Zoning) and is providing stormwater compliance services as required under the CT Construction General permit.

GZA is currently assisting with the design and permitting of the proposed new clubhouse, with construction anticipated to start in the summer of 2018.

Geotechnical Engineer/Project Manager, 3rd Party Drilled Shaft Inspection, Hadley Falls Fish Passage, Holyoke Massachusetts. Mr. Russell managed 3rd party inspection during installation of five 48-inch diameter drilled shafts with 10-foot deep, 42-inch diameter rock sockets installed to support a new intake structure trash rack at the Hadley Falls Power Station as part of enhancements to a fish passage serving migratory endangered fish species. GZA was retained by the General Contractor to perform the 3rd party inspections and provide guidance during construction.

Geotechnical Engineer, Bridge No. 02866 Emergency Replacement, Coventry/Mansfield, Connecticut. Mr. Russell led the subsurface investigation and geotechnical evaluation for foundation of a replacement bridge over the Willimantic River. The replacement bridge was designed with integral abutments supported on piles. Design was complicated by shallow bedrock conditions on the eastern side of the river and significant amounts of cobbles and boulders on the western side.

Geotechnical Engineer, MASS MoCA Phase III, North Adams, Massachusetts. Mr. Russell led the subsurface investigation and geotechnical evaluation for the redevelopment of an historic mill building (Building No. 6) to expand exhibition space at the Massachusetts Museum of Contemporary Art (MASS MoCA). GZA's work on the project included review of historic data, coordination and oversight of the subsurface investigation, including one test boring and test pit excavation, geotechnical and corrosivity testing and development of engineering recommendations for foundation support. By utilizing data from historic subsurface investigations by the USACE, significant time and cost savings were achieved during the field-work portion of the project.

GZA also provided LSP services, developing the Soil Management Plan and Contractor's Health and Safety Plan that were implemented during intrusive work due to existing contamination on the site.

Geotechnical & Civil Engineer, River Road Retaining Wall, Northampton, Massachusetts. Mr. Russell provided oversight for the field investigation (geotechnical borings) in support of design and permitting for the replacement of an approximately 900-foot-long retaining wall that supports River Road and a sanitary sewer force main serving an adjacent town. Following the subsurface investigation, Mr. Russell assisted in the design of the replacement retaining wall and reconstruction of the traveled way.

RESUME

Guy P. Dalton, P.E., LSP, LEP

Associate Principal / Office Manager

Summary of Experience

Mr. Dalton is an Associate Principal with over 28 years of experience on environmental site investigations, remedial action and closure projects. His roles in these projects have been in project management, remedial technology review, pilot testing, and selection, permitting, public participation, agency coordination, report writing, technical analysis, safety and cost estimating. He has been involved in numerous large scale RCRA, MA MCP and CT RSR permitting, site investigation, remediation and closure efforts throughout the Northeastern United States, Michigan and Idaho. He also provides environmental support services to construction contractors. His broad knowledge of many technical elements allows him to successfully manage large-scale interdisciplinary and complex projects that are required to comply with state and federal environmental requirements, while always keeping in mind the client's goals and objectives. He has functioned as GZA's Springfield, MA office Environmental Health and Safety (EH&S) Coordinator and is currently the GZA Springfield Office Manager.

Relevant Project Experience

City of Springfield – MCP Support Services, Springfield, Massachusetts. (2013 to present). Senior Project Manager for various projects for the Springfield Department of Parks, Buildings and Recreation Management involving various site improvements and redevelopments at several City parks. Projects included the preparation and implementation of a Soil Management Plan and Health and Safety Plan for work in an area covered by an AUL, the preparation and implementation of a RAM Plan and submittal to MassDEP of a RAM Completion report, and various MCP-related oversight and support services.

DevelopSpringfield – UST Removal Projects, Springfield, Massachusetts. (2015 to 2016). Senior Project Manager for two projects involving the removal oversight, monitoring and subsequent impacted soil removal for two underground storage tanks (USTs) from a former automobile service station and a former residential property. One project required notification to MassDEP of a reportable release and the subsequent implementation of a RAM Plan to address the remediation of fuel oil impacted soils.

Michelin N.A., Inc. - Site Investigation, Remediation, Closure & Redevelopment, Former Uniroyal Tire Factory, Chicopee, Massachusetts (2006 to present). Senior Project Manager and Site Safety Officer for a project involving the characterization, remediation, and redevelopment of an 18-acre former tire-manufacturing facility Brownfield site. This work required building decommissioning and asbestos abatement (by others), and infrastructure rehabilitation. Mr. Dalton implemented USEPA Toxic Substances Control Act (TSCA) and MassDEP Massachusetts Contingency Plan (MCP) assessment and remediation plans for polychlorinated biphenyl (PCB), petroleum hydrocarbon and metals-impacted soils, sediments, concrete, and drainage system components, and volatile organic compound (VOC)-contaminated groundwater, and has worked with site owners and potential developers on plans for the reuse of the property. The project has involved completing three in-situ chemical oxidation (ISCO) groundwater injection efforts to treat free- and dissolved-phase petroleum residuals using RegenOx. It has also involved concrete, asphalt, and soil removal activities; PCB transformer removals; and

Education

B.S., 1988, Environmental Engineering, Syracuse University

Registrations & Certificates

1994, Professional Engineer, Vermont, #018-0006618
2000, Professional Engineer, New Jersey, #24GE04267400
2007, Underground Storage Tank Closure and Subsurface Evaluation License, New Jersey, #454363
2008, e-RAILSAFE Badge: e-VERIFILE.COM, Inc., #653822101477
2009, Licensed Environmental Professional, Connecticut, #498
2010, Certified USEPA Lead-Based Paint Renovator
2013, Licensed Site Professional, Massachusetts, #1450

Areas of Specialization

- MA MCP & CT RSR Compliance
- Environmental Site Assessments (incl. ASTM Phase I & II ESAs)
- Remedial Alternatives Evaluation
- Pilot Test & Remedial Systems Design & Implementation
- Site Remediation & Closure
- Brownfields Assessment, Cleanup & Redevelopment
- Environmental Permitting
- Contractor Support Services

Guy P. Dalton, P.E., LSP, LEP
Senior Project Manager

drainage system sediment removal actions, which included the operations of a permitted, temporary, on-site wastewater treatment system and excavation dewatering and treatment systems. Mr. Dalton acted as Supervisor for numerous permit-required confined space entries performed to characterize drainage system structures and electrical equipment vaults under a USEPA-approved TSCA Cleanup Plan. The project has also included the closure of four deep groundwater production wells, the removal of three underground storage tanks (USTs), the construction of a TSCA cap, and both ecological and human health risk assessments.

Phase I and II Environmental Site Assessments and/or Hazardous Building Materials Surveys, Various Clients and Sites in Massachusetts and Connecticut (2010 to present). Senior Project Manager for Phase I and II ESAs and HBM surveys in MA and CT for DevelopSpringfield, HAP Housing, the City of Springfield, the City of Holyoke, North American Self Storage, Wide World of Indoor Sports, Blackinton Mill/Broder, LLC, New Bedford Airport, Fitchburg Airport, Bowditch & Dewey, LLP, Northeast Realty Leasing & Management Co., Webster Bank, Confidential Capital Advisors, North American Self Storage Group, the United Methodist Church, the CT DCS, and Housing Enterprises, Inc. of Enfield, CT. Phase I ESA's were performed in general accordance with the guidelines described in ASTM Standard Practice E 1527-2013 for Phase I Site Assessments while Phase II ESA's were performed in accordance with CTDEEP RSR and MassDEP MCP guidance and regulations.

Dolben Company, Inc. – Site Assessment, Remediation and Closure, Springfield, Massachusetts. (2014 to present). Senior Project Manager for a project involving the notification to MassDEP and subsequent assessment and MCP response actions related to three releases to indoor air, groundwater and soil at this residential apartment complex facility. In addition to soil and groundwater assessment, risk characterization and the preparation of an MCP Downgradient Property Status (DPS) Submittal and a Permanent Solution Statement for the groundwater and soil releases, this project also involved the assessment of indoor air via a vapor intrusion assessment that included the assessment of indoor and sub-slab air and the preparation and implementation of an MCP Immediate Response Action (IRA) Plan to address an MCP Condition of Substantial Release Migration (SRM) into residential indoor air. This involved the piloting, design, installation and O&M of a sub-slab depressurization system (SSDS) to reduce indoor air concentrations of chlorinated solvents (primarily perchloroethylene, PCE or "perc") and the preparation and submittal to MassDEP of IRA Status and Remedial Monitoring Reports.

Eversource Energy – Former MGP Site Assessment and Remediation, Framingham, Massachusetts. (2014 to 2016). Senior Project Manager for a project involving on-going assessment and remediation of this former MGP site, including groundwater and surface water monitoring, test pit investigations of an abandoned former Open Tar Well, capping of areas with tar seeps in an active trucking company yard, and preparation of an MCP Phase II Scope of Work for review/approval by MassDEP that included both on-site and off-site investigations of soils, groundwater, surface waters and wetland soils and sediments. The project also involved the preparation of presentations and cost estimates for the Phase II activities and potential remedial options for the Client.

Mass MOCA – Various MCP Support Services, North Adams, Massachusetts. (2014 to present). Senior Project Manager for projects involving various MCP response actions including the preparation and implementation of Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) in areas of the Site covered by an AUL for various facility improvements. The projects also included the preparation and submittal to MassDEP of an AUL Amendment to remove worker limitations for the basements of two Site buildings, based on improvements made to those buildings and observed by GZA, which saved our client significant costs by not having to hire OSHA Hazwoper trained workers for subsequent construction activities in those areas.

The Colvest Group, Ltd. – Site Redevelopment Support Services, Springfield, Massachusetts. (2015). Senior Project Manager for a project involving the determination of the presence of regulated wetlands and the applicability of MassDEP solid waste landfill closure requirements, and the implementation of MCP site assessment activities at a property our Client was preparing for redevelopment. Our work included a site inspection for wetland evaluation purposes, selective site clearing, the installation and sampling of soil borings and soil gas monitoring wells, and the comparison of laboratory results to applicable MCP standards.

RESUME

Nathaniel Y. Arai, P.E.

Civil Engineer / Senior Project Manager

Summary of Experience

Mr. Arai is a Senior Project Manager for GZA who oversees both the technical and financial aspects of civil engineering project design and management. His project record includes design, permitting, survey, studies, evaluations, layout, and construction observation experience in the public and private sectors for various civil engineering projects including dam and flood control systems inspection and repair, lake and pond dredging, water resources engineering and restoration, site design for land development and redevelopment, and master planning. Design considerations for projects include earthworks and grading, utility location, watershed hydrologic evaluation, hydraulic systems and component analysis, determination of groundwater availability and proximity, sedimentation analysis and control, construction phase water handling, and construction sequencing.

Mr. Arai has performed dam inspections for the Commonwealth of Massachusetts as part of the Department of Conservation and Recreation's (MADCR) regular periodic dam safety inspection program and has authored several Phase I Inspection / Evaluation Reports for these inspections. He has conducted several inspections for public and private dam owners and has participated in emergency dam inspections during extreme rainfall events. Mr. Arai was involved in design and construction observation of the restoration of Benedict Pond Dam in Great Barrington, Massachusetts and of Dean Pond Dam in Brimfield, Massachusetts, and in maintenance repairs of the Clam Lake Dam in Sandisfield, Massachusetts.

Relevant Project Experience

Project Manager, Flood Control Works, Chicopee, Massachusetts. Since 2007, GZA has worked closely with the City of Chicopee's Department of Public Works to develop contract plans and specifications, provide permitting services, and construction observation and oversight for multiple construction projects for the City's seven miles of USACE-constructed earthen embankment and concrete floodwall levees. Construction projects have included extensive vegetation removal, concrete structures repairs, pumping station upgrades and repairs, and appurtenant structures repairs on the four separate flood control systems comprising the City's flood control works. Mr. Arai managed the design development of contract plans and specifications and directed construction phase oversight of these projects including contractor field problem solving, submittals review, pay requisitions review, and inspections. In 2009-10, he coordinated a multidisciplinary GZA team engineering effort on the civil, geotechnical, structural, and operational evaluation for accreditation of the flood control works required by FEMA for its flood mapping modernization program. Mr. Arai continues to work closely with City personnel to identify and develop solutions for additional corrective measures to the City's flood control works to meet USACE and FEMA standards.

Project Engineer, Lower Van Horn Dam, Springfield, Massachusetts. Mr. Arai has assisted in Phase I Inspection / Evaluations and Follow-up inspections of the Lower Van Horn Dam, a High Hazard Class dam owned by the City of Springfield and located in an urban park setting in the city. He participated in GZA's Phase II Inspection and Investigation efforts, assisted with design and permitting of restoration planning, and is currently assisting with construction phase services for the restoration of the dam.

Education

B.S., Civil and Environmental Engineering, University of Massachusetts- Amherst
B.A., Geography, University of Massachusetts- Amherst

Registrations & Certificates

Professional Engineer (P.E.)
Massachusetts, #46238
Connecticut, #26481

Certified Floodplain Manager (CFM)

Affiliations

- American Society of Civil Engineers, M.ASCE
- Association of State Dam Safety Officials
- Association of State Floodplain Managers

Areas of Specialization

- Site Design
- Dredging Design
- Contract Bid Documents
- Construction Observation
- Dam Safety and Inspection
- Environmental Permitting

RESUME

Nathaniel Y. Arai, P.E.

Civil Engineer / Senior Project Manager

Project Manager/Project Engineer, Dam Safety Engineering Services, Massachusetts Department of Conservation and Recreation. Participates in GZA's on-going task-ordered engineering services to assist the MADCR with inspection and maintenance of both State-owned and privately owned dams throughout the Commonwealth. Tasks include mandated periodic Phase I Inspection / Evaluations and Follow-up dam inspections and design and construction phase services for maintenance repairs of State-owned dams. Mr. Arai has recently led GZA's efforts for the restoration of Benedict Pond Dam in Great Barrington and Dean Pond Dam in Brimfield and for maintenance repairs of Clam Lake Dam in Sandisfield.

Project Manager, Clam Lake Dam Emergency Inspection and Low-Level Outlet Slide Gate Rehabilitation, Sandisfield, Massachusetts. Mr. Arai led GZA's efforts for MADCR to develop designs and execute the fabrication and installation of a bulkhead plate to block the intake end of the low-level outlet pipe to allow for a dry inspection of the malfunctioning and leaking cast iron low-level outlet slide gate located forty feet below grade inside the dam. Mr. Arai coordinated these efforts, mobilizing an underwater construction contractor and a manufacturer's inspecting engineer to the remote site to gather information on the condition and configuration of the slide gate. Collected data was applied to construction plans and specifications for the intended rehabilitation or replacement of the gates. Mr. Arai developed plans and specifications, assisted DCR with bidding, and provided construction-phase design and engineering support through the successful rehabilitation of the existing slide gate.

Project Manager, Benedict Pond Dam Rehabilitation Project, Great Barrington, Massachusetts. Developed plans and specifications and managed permitting efforts for MADCR for the rehabilitation of a concrete cutoff wall and earthen embankment dam at the Beartown State Forest, a MADCR-owned state park. Design plans incorporated the repair of the concrete spillway and low-level outlet works and park site improvements including replacement of the pedestrian spillway bridge with an accessible crossing, public look-out area, and operational access to the new low-level outlet slide gate operator. Mr. Arai provided design and construction phase services to MADCR in maintaining a compressed construction schedule.

Project Engineer, Upper Roberts Meadow Dam Breach, Northampton, Massachusetts. Mr. Arai has been assisting the project team in evaluation and development of sediment management for the proposed breach and removal of a high hazard stone masonry dam in poor condition. He generated various options for sediment removal and post-breach collection and worked with regulatory representatives in pre-permitting meetings to determine the appropriate solution. Evaluation considerations included cost, land availability, and avoidance of impacts to downstream receiving waters. Mr. Arai prepared Contract Documents including final design drawings and project administrative and technical specifications.

Project Engineer, Paradise Pond Dam Phase I Inspection / Evaluations, Northampton, Massachusetts. Mr. Arai conducted State-mandated Phase I Inspection / Evaluations of Paradise Pond Dam, owned and operated by Smith College. The High Hazard Class dam impounds Paradise Pond, a College and community natural resource. The main structure is stone masonry, containing the primary spillway, with an earthen embankment dike extending upstream to protect the College's athletic fields. GZA's inspections were conducted during partial drawdowns, where exposure of the embankment revealed numerous deep burrowing animal penetrations that led to a major reconstruction of the dike.

Project Manager, Paradise Pond Maintenance Dredging Project, Northampton, Massachusetts. Mr. Arai conducted design, permitting, and construction phase services for Smith College for the hydraulic dredging of a 10-acre pond in the heart of a small college campus. The design incorporated employment of hydraulic dredging with a geotextile fabric tube dewatering system to avoid potentially significant downstream impacts to endangered species habitat within the river corridor downstream of the pond.

Project Manager, Silver Lake Reclamation, Berlin/Meriden, Connecticut. Mr. Arai conducted field survey, design, and construction phase services for the State of Connecticut for the largest inland lake hydraulic dredging program in New England. GZA designed four hydraulic dredging projects conducted and three sediment containment basin cleanout and restoration projects conducted in alternate phases. The project began in 1992 and was completed in 2015.

RESUME

Anja Ryan Duffy, PLA

Landscape Architect

Summary of Experience

Ms. Duffy is a registered landscape architect with over nine years of professional experience in designing, planning, construction phase administration. Her role as a landscape architect within GZA has been to provide project management, develop landscape master plans, facilitate in public participation, and prepare construction documents and technical specifications. Ms. Duffy's work focuses on "low impact design" strategies, with an emphasis on sustainable land redevelopment and ecological restoration practices.

Education

B.S., 2005, Landscape Architecture, University of Massachusetts- Amherst

Registrations & Certificates

2011, CT, Registered Landscape Architect, #1198
2012, Massachusetts, Registered Landscape Architect, #4000
NRPA- Certified Playground Safety Inspector
OSHA- 10 Hour Certification
CPR, AED and First Aid for Adults

Affiliations

- American Society of Landscape Architects
- Boston Society of Landscape Architects
- National Parks and Recreation Association
- Ecological Landscaping Association

Areas of Specialization

- Site Design- Grading, Drainage, Layout
- Planting Design
- Construction
- Estimation
- Graphic Design
- Low Impact Development Strategies

RELEVANT PROJECT EXPERIENCE

DESIGN- PUBLIC/MUNICIPAL

Project Landscape Architect, Gunnery Sgt. Thomas J. Sullivan Park, Springfield, Massachusetts. Ms. Duffy is the lead landscape architect on a five-acre park development project on a lakefront property within Springfield. The park design features a universally accessible kayak launch, flexible porous pavement walkways, and all native species planting design aimed to allow for successive regrowth of meadow and woodland on a site recently devastated by a tornado. Other site amenities include a timber framed pavilion, porous pavement parking area, flagpole and memorial stone overlook area, and a timber framed kiosk with educational signage.

Project Landscape Architect, North Riverfront Park, Springfield, Massachusetts. Ms. Duffy developed a master plan which was instrumental in assisting the City of Springfield with securing a 1.3 million-dollar grant for the redevelopment of North Riverfront Park. Ms. Duffy was the project manager for the project, managing several disciplines. The park design features landscaping, formalized parking areas, pavilion with picnic area, river overlook areas, retaining walls, alteration of a flood control levee to allow for connection to a bike trail, and landscaping featuring a native plant palette.

Project Landscape Architect, Redevelopment of Emerson Wight Park, Springfield, Massachusetts. Ms. Duffy was the lead landscape architect on the redevelopment of an 8.5-acre park in the South End neighborhood of Springfield, MA. The 1.3-million-dollar construction project included improvements to site drainage, a new sports field, multi-age group playground, waterspray play area, regulation-size basketball court, walking trails, picnic area with pavilion, and landscaping.

Project Landscape Architect, New Elias Brookings School, Springfield, Massachusetts. Ms. Duffy served as lead landscape architect for the site design of a new elementary school. Ms. Duffy worked closely with GZA civil engineers throughout the design process, as well as with the client and prime consultant, Drummey Rosane Anderson, Inc. Architects. The site design features a 78-car parking lot, play field, playground with rubber safety surfacing, assembly plaza, perimeter fencing, accessible walkways, and drought tolerant landscaping.

Project Landscape Architect, Development of Camp Wilder Park, Springfield, Massachusetts. Ms. Duffy designed and developed construction documents for a new 4-acre park on tornado damaged land. The site, once covered in forest, was swept clean of mature trees. Ms. Duffy designed a plan to accentuate the landform, reforest the site, infiltrate stormwater runoff using rain-gardens, and provide views of an existing pond and beach area. The park also features a picnic grove with pavilion, accessible

Anja Ryan Duffy, PLA

Landscape Architect

walkways, play equipment, a junior soccer field, and gravel parking lot. Ms. Duffy project managed the construction phase of the project for the Client, the City of Springfield.

Project Landscape Architect, Camp STAR Angelina, Springfield, Massachusetts. Ms. Duffy provided design services for the master plan of development for a universally accessible day camp within a 785-acre wooded park. The master plan was split up into three phases of development. Working in a team of architects and engineers, Ms. Duffy was responsible for final site design and construction document production for the first phase, which included an access road, pool house, swimming pool, stormwater management system consisting of infiltration trenches and rain gardens.

1916 Remembrance Garden, Springfield, Massachusetts. Ms. Duffy developed a landscape master plan for the development of a 1916 Remembrance Garden for the City of Springfield. Her client, the City Parks Department, commissioned Ms. Duffy to create colorful perspective renderings of her proposed work and used it to promote the project and generate funding. The project was constructed in-house by City employees and donated services.

Clifford A. Phaneuf Environmental Center, Springfield, Massachusetts. Ms. Duffy was the lead landscape architect for the redevelopment of an environmental center located in a 785-acre public park in Springfield. The LEED-accredited project included handling stormwater from the site and building in a series of raingardens, specifying local materials, and designing a planting design using native drought tolerant plant species. Ms. Duffy was the project manager and managed a team of civil engineers, environmental scientists, and geotechnical engineers. The project also included an accessible kayak launch and fishing platform onto Porter Lake.

Nathan Bill Park, Springfield, Massachusetts. Ms. Duffy was the lead landscape architect and GZA project manager for the redevelopment of Nathan Bill Park, a 20-acre public park. Ms. Duffy's thoughtful redesign included a new 70-car parking lot, an improved playground and picnic area, a new water spray play area, improved baseball fields, improved tennis and basketball courts, construction of half a mile-long walking track, and landscaping featuring a native plant palette. The park was dedicated in Summer of 2015 and was constructed on time and within budget.

Mary Troy Park, Springfield, Massachusetts. Ms. Duffy was the lead landscape architect and GZA project manager for the development of Mary Troy Park project. The one-acre public park was designed to be used by all age groups and peoples of all abilities. Ms. Duffy's design featured a seating plaza with sensory garden plantings, water spray play area, playground, fitness equipment, walking paths, fencing, signage, lighting, landscaping, and irrigation.

MASTER PLANNING

Van Horn Park Illustrative Master Plan, Springfield, Massachusetts. Ms. Duffy worked with a senior landscape architect to develop the "Illustrative Master Plan for Van Horn Park" for the City of Springfield, MA. Proposed improvements within the 115-acre park include a day-lighted stream channel, wetland board walk, walking trails, and pond overlook.

MA Department of Conservation and Recreation Trails Study, Statewide Massachusetts. Ms. Duffy developed prototypical designs for the repair of multi-use trails within the MA Department of Conservation and Recreation (DCR) parks system. Her work included developing preliminary cost estimates for new bridges, various erosion control techniques and trail repair treatment.

Meadow Brook Ravine, Springfield, Massachusetts. Ms. Duffy provided landscape architecture services for the master planning of a trail system along Meadow Brook Ravine in Forest Park, a 785-acre wooded public park. The design involves boardwalks, stone dust trails, and stream crossings along a low lying woodland area. The ravine features artifacts such as grottos and seating areas from the park's beginning times when the area was pristinely maintained and a carriage path followed the stream channel. Today the ravine is a wild place, overgrown with trees, and is habitat to many of the region's wildlife, including deer, and fox. Ms. Duffy's master plan proposes to restore the grotto and add educational signage depicting the ravine in it's past, while highlighting today's naturalized condition by providing information on the types of animal and plant species present.

Stearns Square & Duryea Way, Springfield, Massachusetts. Ms. Duffy developed a master plan for the restoration of Stearns Square, a historical park, and the redevelopment of Duryea Way, a pedestrian alley way within downtown Springfield. Ms. Duffy's plan features expanded City sidewalks that are to be used for outdoor dining, an improved Stearns Square including restoration of a historical fountain created by Augustus Saint-Gaudens, and a fully reconstructed pedestrian alley way featuring space for outdoor dining, public art, and performance.

RESUME

Jennifer R. Mackey Burke, P.E., CPSWQ®, LEED Green Associate

Water Resources Engineer

Summary of Experience

Ms. Burke serves as a GZA Project Manager and Water Resources Engineer in the office in Springfield, Massachusetts. Her assignments include supporting work for office engineering projects and individual project responsibility for planning, coordination and operation of various projects for which she is project manager. These projects include development and implementation of water quality sampling programs, hydrologic/hydraulic modeling of steady and non-steady flow applications, development of environmental planning documents (MEPA, CEPA, NEPA), stormwater related permitting and program support, watershed studies, dam engineering inspections, engineering analyses, construction phase services, and on-site construction monitoring activities. Prior to joining GZA, Ms. Burke was involved in research at the University of Massachusetts relative to deicing agent contamination of two highway department sites in eastern Massachusetts. This project involved development and execution of field and laboratory experiments, monthly sampling and laboratory analysis of groundwater and surface water samples from over 200 wells and control points, remote downloading of flow and water quality data from continuously logged stormwater outfalls, and mathematical modeling with optimization programming. The project also included coordination with State DOT personnel and a team of engineers and scientists.

Relevant Project Experience

STORMWATER PERMITTING

Engineer, NPDES Phase II Permitting Assistance, Town of Milford, Massachusetts. Provided multi-year compliance activities for Town of Milford for their NPDES Phase II Small MS4 program. Ms. Burke was responsible for developing a Stormwater Management Plan and Illicit Discharge Detection Program for the Town. Program also included field investigations to identify/GPS locate all stormwater outfalls, generating a master list of detention basins/BMPs, and tailoring Town program to address specific system deficiencies. Also included was a public education program (educational materials and presentations) and implementation of an illicit discharge detection program with sampling and identification of outfalls.

Project Manager/Engineer, New Bedford Regional Airport Industrial Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention Control and Countermeasure Plan (SPCC), New Bedford, Massachusetts. Prepared Industrial SWPPP to comply with EPA NPDES requirements for New Bedford Regional Airport and assisted in SPCC preparation. Project included field review, record review, interviews and stormwater drainage system review, documentation of existing conditions, SWPPP preparation, and SPCC assistance.

Engineer, Construction SWPPPs for Sgt, Sullivan, North Riverfront Park, Emerson Wight, Camp STAR, Rebecca Johnson, Marshall Roy, Nathan Bill, and DeBerry Parks, Springfield, Massachusetts. Developed Construction SWPPPs for municipal parks projects within the City of Springfield.

Education

B.S., Civil Engineering, Lafayette College
M.S., Environmental Engineering, University of Massachusetts- Amherst

Registrations & Certificates

2007, Professional Engineer, Connecticut, # PEN.0025483
2010, Professional Engineer, Massachusetts, #48584
2011, LEED® Green Associate, #10677898
2013, Certified Professional in Stormwater Quality (CPSWQ®), #0939

Affiliations

- American Society of Civil Engineers (ASCE) and Boston Society of Civil Engineers Section (BSCES)
- New England Water Environment Association (NEWEA) and Water Environment Federation (WEF), NEWEA Stormwater Committee
- Massachusetts Airport Management Association (MAMA)

Areas of Specialization

- Environmental Permitting
- Stormwater Services
- Water Resources Services
- Hydrologic/Hydraulic Modeling

RESUME

Jennifer R. Mackey Burke, P.E., CPSWQ®, LEED Green Associate

Water Resources Engineer

ENVIRONMENTAL PLANNING DOCUMENT PREPARATION/PERMITTING

Project Manager, Watershops Pond Federal Lands to Parks (FLP) Stewardship Report, Springfield, Massachusetts. Developed FLP Stewardship Report for continued compliance with FLP program for Watershops Pond. Project included review of historical documents, deeds, and mapping, field review for existing conditions documentation, and developing responses to required information to National Park Service.

Project Manager, Springfield Parks 6(f) Conversion Project, Springfield, Massachusetts. Developed public facility and parkland conversion applications and supporting graphics and materials for three parks in City. Developed EA for NEPA compliance for one public facility application process. Coordinated with MA EEA DCS and NPS to facilitate application approval process.

Project Engineer, New Elias Brookings School Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), Springfield, Massachusetts. Prepared EA, Public Notice, and FONSI for the construction of a new Elias Brookings School in Springfield, MA, to replace the original school which was damaged by a tornado and temporary classrooms on an adjacent site. Site was reviewed for natural resources, hazardous materials, zoning, size and layout constraints, utilities, cultural resources and other required review topics in accordance with the NEPA process. Draft documents were prepared for the City and FEMA and comments addressed to achieve NEPA compliance.

SITE CIVIL ENGINEERING/STORMWATER RELATED SERVICES/WATER QUALITY STUDIES

Project Manager, Dickinson Street and Tiffany Street Washout Investigations, Springfield, Massachusetts. Conducted field investigation of two roadway stream crossing sites to determine cause of flooding and washouts in the area. Project included hydrologic and hydraulic drainage system modeling, camera investigation of drainage system pipes and structures, review of historical plans, and recommendations report for City of Springfield including options for remediation and preliminary cost estimates. Project highlights included identification of sewer system cross connection/leak into stormwater system, identification in the field of two failed outfalls which were resulting in system overtopping, and identification of undersized drainage systems.

Project Manager, Forest Park Zoo Drainage Improvements, Springfield, Massachusetts. Prepared design, construction drawings, and specifications for drainage improvements at Forest Park Zoo, converting existing open detention area to subsurface detention with proprietary swirl concentrator unit for particle removal and proprietary filtration unit to assist with bacteria and nutrient removals. Project provided water quality treatment for existing stormwater discharge as well as mitigation of stormwater peak flows, as well as providing additional exhibit space and mitigating vector attractant by relocating detention below ground.

DAMS/FLOOD CONTROL AND MITIGATION

Project Engineer, FEMA Pre-Disaster Mitigation (PDM) Grant Applications, Multiple Projects, Springfield, Massachusetts. Prepared four PDM Grant Applications for projects within the City of Springfield, provided information used for Benefit-Cost Analysis. Projects included culvert improvement projects, a dam improvement project, and a slope stability related project.

Project Manager, Watershops Pond Dam and Lower Van Horn Reservoir Dam Phase I Inspection/Evaluations, Springfield, Massachusetts. Conducted field inspection and historical document review for dam owned and maintained by City of Springfield. Prepared Phase I reports for submission to MA DCR Office of Dam Safety.

Engineer, Emergency Action Plans, Various communities, Massachusetts. Using HEC-GEORAS, HEC-RAS, and HEC-HMS, developed models to represent dam breach scenarios for multiple dams with other engineers on the Team. Prepared Emergency Action Reports with the Project Team.

Project Manager, Grant Application for Removal of Putnam's Puddle Dam and Breckwood Pond Restoration Project, Springfield, Massachusetts. Developed grant application for Restoration and Revitalization Priority Projects Nomination for MA Department of Fish and Game Division of Ecological Restoration. Project would involve removal of partially breached dam, stream channel restoration, and dredging/restoration to affected downstream resource.

Stephen R. Ulman, PE

Senior Traffic Engineer

BEEE – Manhattan College

Years of Experience: 38

Registrations and Certifications
Professional Engineer Registration: CT (#0018591), MA (#48468)

Steve Ulman has a unique blend of traffic signal system hardware and intersection design experience. Prior to joining Alfred Benesch & Company (Benesch), he served as a signal systems engineer with Automatic Signal Division, a Mark IV Company. Steve has utilized his computer expertise to write several custom programs for traffic engineering applications. He has also assisted in the customization of Benesch's AUTOCAD environment for use in roadway and traffic design.

During his tenure with Automatic Signal—a leading manufacturer of traffic signal controllers—Steve designed intersection control systems, controller cabinets, special sequence logic, and system integration strategies. He also assisted customers throughout the country in meeting sequencing and systems coordination needs and in interfacing Automatic Signal equipment with computerized signal systems. Steve also participated in the research and development of the company's plans and specifications to develop computerized signal systems.

Steve Ulman has served in Project Management and Project Engineering roles for traffic capacity and parking analyses, evaluation of existing signal equipment, and design of traffic signal and geometric improvements at intersections throughout Connecticut and Massachusetts. He has experience using signal system analysis programs and has analyzed numerous signal systems—existing and proposed—in conjunction with various projects.

CTDOT Signal Revisions at 44 Municipal Locations – Enfield, East Windsor, Hartford and West Hartford, CT

Project Manager. Provided traffic design services for the replacement of 44 Traffic Signals in the towns of Enfield, East Windsor, Hartford and West Hartford, CT. The existing signals were part of the CTDOT Urban Traffic Control System (UTCS). The objectives of this project were to remove the signals from UTCS control, replace equipment at these locations, and incorporate them into a closed loop traffic signal system with hard wire interconnect. Developed new timing plans for all locations to improve operations. The signal sequence at many locations was also revised. The intersections are located along the length of Route 5 in East Windsor and Enfield, and New Britain Avenue in West Hartford and Hartford. The total length of the project exceeds 12 miles.

CTDOT I-95 Corridor Traffic Signals Preemption System – Various Locations throughout Connecticut

Project Manager. Designed an Emergency Vehicle Preemption System (EVPS) at 270 traffic signals in 13 municipalities in the southwest corridor of Connecticut. The project was performed in conjunction with the Intelligent Vehicle Highway System (IVHS) on I-95. Scope included field inventory of existing signal equipment, determination of fire runs, the type of equipment owned by various municipalities, and traffic control equipment needs and suitability of existing apparatus for the addition of a fire preemption unit. Developed contract documents for implementation by each of the 13 municipalities.

Traffic Signal Improvements at Griswold Street/Harris Street & House Street – Glastonbury, CT

Project Manager. Providing preliminary engineering; preliminary, semi-final and final design; technical specifications and construction related services for traffic signal installations. Traffic signal design services encompassed a review of existing data and development of intersection capacity and queuing analyses for the intersection, along with the preparation of traffic flow diagrams. Preliminary design services entailed the review

of data and documents to identify critical control items. Signal design accommodates the proposed realignment of House Street opposite Harris Street and includes video detection, emergency vehicle pre-emption and interconnection with the intersection of Griswold Street at the Route 2 eastbound exit ramp. Designed an interconnection and coordination scheme with the intersection of Griswold Street at Bantle Road and the Route 2 eastbound exit ramp. Services also included evaluation of Maintenance and Protection of Traffic schemes; preparation of plans and supporting documentation for public meetings; quantity and cost estimates; report preparation; and attendance at coordination meetings with the Town, CTDOT, utilities and other agencies. Benesch will also provide services during construction for the traffic signalization portion of the project.

Education
BEEE – Manhattan College

Years of Experience: 38

Registrations and Certifications
Professional Engineer Registration: CT (#0018591), MA (#48468)

Sigourney Street Station Streetscape Improvements - Hartford, CT
Traffic Engineer. Conducted a detailed site investigation to observe the general site conditions, traffic patterns, and traffic management. Documented existing facility and surrounding environment through use of a combination of photographs and video. Obtained traffic count and crash data for the project area from the City of Hartford and State of Connecticut. Turning movement counts were performed during morning and afternoon peak periods at five (5) intersections. Reviewed documentation pertaining to the project, as well as other projects in the vicinity. Preparing preliminary design plans for sidewalk reconstruction, including planting strips and curb ramps; traffic calming measures; traffic signal revision to accommodate pedestrian crosswalk and phasing changes and structural engineering associated with bridge lighting. Cost estimates are being developed and will be revised throughout the design process. Bid documents and construction management services will also be provided. In association with TPA Design Group.

Capitol Avenue Streetscape Improvements - Hartford, CT:
Project Manager. Performing a detailed site investigation to observe general site conditions, traffic patterns, and traffic management. Traffic engineering services include a roundabout study. Data collection and assessment of existing conditions encompass a review of the City of Hartford's ***"Greening America's Capitals"*** project and other projects in the vicinity; the City's standard details; participation in a walking tour to review existing conditions; meetings with stakeholders; and a detailed site investigation. In association with TPA Design Group.

Route 147 Roadway & Bridge Improvements - Agawam/West Springfield, MA
Traffic Engineer. Benesch is working with MassDOT to redesign the roadway and heavily travelled bridge. The project also includes the reconstruction of three intersections at Routes 147/75/159, Route 147/Walnut Street/Walnut Street Extension and Route 147/ River Street. Three (3) traffic signals will be replaced at the referenced intersections. Additional turning lanes will be incorporated into the design at all intersections to increase vehicular capacity. Traffic signals will include ADA/AAB compliant crosswalks and signal clearances, emergency vehicle preemption and signal interconnections. Benesch is also providing horizontal and vertical realignment, storm drainage, stormwater management, and temporary traffic control plans.

HERITAGE SURVEYS, INC.

Professional Surveyors and Engineers
241 College Highway & Clark Street - P. O. Box 1
Southampton, Massachusetts 01073-0001

Bruce A. Coombs, President
Professional Surveyor, MA, CT & VT
E-mail: bruce@heritagesurveys.com

Telephone (413) 527-3600
Facsimile (413) 527-8280
Website: heritagesurveys.com

Bruce A. Coombs, PLS
#27814
President
Resume and Professional Information

Bruce A. Coombs, founder and president of Heritage Surveys, Inc., since 1975, is a Registered Professional Land Surveyor in Massachusetts, Connecticut and Vermont, and a licensed Real Estate Broker in Massachusetts. He attended Paul Smith's College and received his B.A. degree in Forest Management from the University of Massachusetts. He has worked in the surveying profession for about 30 years, and has been active in various professional and civic organizations for many years.

As President of Heritage Surveys, Inc., Bruce interacts with the public, oversees all operations, and coordinates work with the assistance of the senior management and business staff. Some additional responsibilities include overseeing employee payroll, retirement and benefit plans, insurance plans, billing, receivables, payables, building construction and maintenance, and the acquisition of vehicles, computer and field survey equipment. Bruce also reviews and endorses all plans and all documents produced as final work products, and he interacts with clients and employees as needed.

Bruce is a member and past president of the local chapter of the Massachusetts Association of Land Surveyors, and Civil Engineers, and a member of the American Congress of Surveying and Mapping and the Massachusetts Tri-County Highway Superintendents Association. Bruce regularly attends courses and educational seminars relative to the surveying and engineering professions, and has also conducted seminars on surveying for the National Business Institute and Springfield Board of Realtors. He is also a Licensed Real Estate Broker and a Certified Soil Evaluator in Massachusetts.

Bruce has been a resident of Southampton, MA, since 1966, and is a past member and chairman of the Southampton Planning Board and Conservation Commission, and a recent advisor to the Town of Southampton Rural Lands Committee for a comprehensive zoning update and GIS mapping project. Bruce is also a member of the Southampton Capital Improvement Committee and the Southampton Historical Society, and has recently completed restoration of the Old Southampton Library building, acquired in 1998. The library building is used to house antiquarian books and ephemera collected and sold through Heritage Books, an Internet bookstore. Additional information can be found at websites located at heritagesurveys.com and heritagebks.com.

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Website: heritagesurveys.com

Peter B. Watson
General Manager
Resume and Professional Information

Peter B. Watson graduated from Paul Smith's College with an associate degree in Land Surveying, and began working at Heritage in 1978. In 1982 Peter Passed the Fundamentals of Land Surveying S.I.T. Exam, given by the Board of Registration of Professional Engineers and Land Surveyors. Since 1978 Peter has gained extensive experience working in all aspects of surveying including research, field surveying, and computer aided design and drafting. Peter is also very familiar with subdivision and zoning regulations in most of the towns in Western Massachusetts, and he served as a member and chairman of the Cummington Planning Board. Peter has also been a member of Connecticut Valley Association of Land Surveyors and Civil Engineers, and attends professional seminars relating to the surveying profession whenever time permits.

In recent years Peter has been the General Manager of Operations at Heritage Surveys. He interfaces with clients, evaluates survey projects, and provides cost estimates. He schedules, coordinates, and oversees all research, field survey work, office calculations, and Computer Aided Design and mapping performed by other employees, and communicates with the administrative staff on a regular basis to insure that the customer's needs are satisfied and that our work is completed on time and within budgeted amounts.

TIMOTHY F. CURRAN, PE
Principal in Charge/Mechanical Engineering

Tim is a Principal and Senior Project Manager with a background in mechanical systems design, plant engineering, and operations. He has extensive experience in the design, construction and operation of clean rooms, laboratories, industrial ventilation, process piping, and energy management systems. Tim heads RDK's Amherst office providing leadership and management of the engineering staff.

EDUCATION
University of Massachusetts, BS, Mechanical Engineering

REGISTRATION/ PROFESSIONAL AFFILIATIONS
Registered Professional Engineer in MA #34711

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

International Society of Pharmaceutical Engineers

National Council of Examiners for Engineering and Surveying (NCEES)

YEARS OF EXPERIENCE
32

YEARS WITH RDK ENGINEERS
12

RELEVANT EXPERIENCE

City of Springfield On-Call, Springfield, MA
Principal in Charge for MEP subconsultant design to Timothy Murphy Architects on their City of Springfield On-Call. Projects included:

- Fire Department HVAC Equipment Evaluation
- Gerena School HVAC Study
- Gerena School Tunnel Renovations
- Marcus Kiley Middle School Fire Alarm System Replacement
- Old Zanetti School, Damage Remediation Study
- South End Community Center Damage Remediation Study

MassMutual Financial Group, BDR & Retail District Renovations, Phases 1 & 2, Springfield, MA
Feasibility study and basis of design for a gut renovation to 25,000 to 30,000 SF of existing space in a c.1923, four-story, occupied office building for modern, technology-infused, high-end core services such as cafe dining, social spaces, seminar, and retail destinations.

Gerena School HVAC Study, Springfield, MA
MEP review of existing HVAC systems documentation, detailed site survey, evaluation of various issues with existing systems, and recommendations for improvement at the Gerena School, which had been experiencing issues with indoor air quality (IAQ) and performance of HVAC systems.

City Hall Chiller Replacement, Springfield, MA
Engineering services for replacing two existing chillers serving the City Hall which were old and in need of replacement. The chillers are located in the Boiler Building which is currently slated for a roof replacement. In this same building there are two other chillers that serve Symphony Hall.

Carlisle Town Hall, Carlisle, MA
Engineering services for the renovation of the HVAC systems serving the Town Hall building. RDK provided an in-depth study and follow up design to correct deficiencies to provide for a fully functional, energy efficient, and controllable HVAC system.

INTRODUCTION

The organizational structure, basic functional responsibilities, levels of authority, lines of communication, and interfaces between groups/departments/offices within GZA performing activities affecting quality are identified in this section. This organizational structure pro-vides for efficient and effective implementation of GZA's Quality Management (QM) Program.

PRINCIPAL-IN-CHARGE (PIC)

The Principal has primary project responsibility including project execution, assignment of qualified and adequate project staff and resources, incorporation of quality assurance procedures and project compliance with the QM Program, including: 1) establishment of project work scope and staffing (including outside suppliers); 2) development of the project budget; 3) development of the project schedule; 4) definition of applicable reference documents, procedures, and relevant technical practices; and 5) confirming compliance with the terms and conditions of the client con-tract. The PIC follows-up on quality concerns to ensure that they are properly addressed during execution of the project. The PIC for work with the City of Springfield under RFP No. 18-010 is identified as Tom Jenkins, P.E. Mr. Jenkins will be the individual identified in RFP No. 18-010 as the "Project Manager" (not to be confused with GZA's internal designation of Project Manager, as defined below).

PROJECT MANAGER

GZA's PM is responsible for "day-to-day," detailed project management and execution, including: 1) providing appropriate project specific QA/QC training to project staff; 2) coordinating and scheduling work activities and communications among the project staff and client; 3) complying with GZA Policies on the project; 4) managing project schedule and budgets; and, 5) maintaining project specific documentation and document control. The PM is responsible for compliance with the terms and conditions of the client contract, and acquisition, handling, and disposal of project materials. In many cases, the PIC may function as GZA's PM.

CONSULTANT/REVIEWER

The Consultant/Reviewer (C/R) is responsible for independent, third-party review of all work products in accordance with GZA Policy 04-0200 (attached). The C/R is typically selected by the PIC, but for certain projects or assignments of significant size or risk, the Office Manager, Regional Operating Officer, or Technical Practice Lead may also be involved.

The C/R is a senior-level individual (by policy, typically a Principal) with appropriate subject matter experience and expertise who is not involved in the day-to-day project execution and is tasked with providing an independent, third-party project review. On rare occasion, other qualified senior technical personnel may act as C/R with prior authorization per GZA Policy 04-0200. The C/R is assigned at the project proposal and planning phase and reviews all work products except data transmittals that express no opinions or conclusions. For projects encompassing several diverse and distinct disciplines, more than one C/R may be assigned to the project (i.e., different C/Rs may be assigned to different project tasks). The C/R may identify and use qualified individuals to assist with certain aspects of the review.

PROJECT STAFF

Projects are staffed by teams of qualified individuals that perform the required work, including the necessary technical, administrative and support activities. Team members are responsible for complying with project requirements applicable to the work they perform. They are directly responsible for the quality of that work by knowing and properly implementing the technical and applicable QA/QC requirements of the QM Program. They have the responsibility to correct quality concerns with their work, regardless of how identified, and they have the freedom to recommend solutions to quality concerns outside their area of responsibility. They keep the PIC and PM informed of the status of their work and maintain the project resources that are under their care.

GZA's Policy 04-0200 follows.

Number:	Vol. 04 No. 0200
Date:	August 12, 2011
Supersedes:	November 20, 2009
Revised and Approved:	RMD and RMC (2011)
Sponsoring Function:	RMD and PPC
Page:	1 of 5

CONSULTANT REVIEWER (C/R) POLICY FOR REVIEW OF PROFESSIONAL WORK PRODUCT

A. INTRODUCTION

1. Since the early 1980s, GZA has had a report review policy as a basic element in the conduct of our work. Through the years, this has been expanded to include all technical correspondence that expresses professional opinions and recommendations. With time, the procedure has become more formalized. Our reports generally reflect a considerable amount of judgment. It is important that our reports, to the extent practical, reflect the cumulative experience of an office and the company. In addition, reviews should improve the appearance and writing quality of our professional work product which is often taken by Clients and other readers as a direct reflection of the technical quality of the professional work. Therefore, it is important that any professional work product be given an appropriate review before it is sent to our client or other outside readers in either draft or final form.

2. A PROFESSIONAL WORK PRODUCT IS DEFINED AS ANY PROJECT DOCUMENT WHICH EXPRESSES an OPINION, PRESENTS DESIGNS, INTERPRETATIONS OR CONCLUSIONS, OR PROVIDES RECOMMENDATIONS. THESE INCLUDE PROPOSALS, CONTRACTS, TECHNICAL REPORTS, DATA REPORTS WHICH ALSO SET FORTH OPINIONS (*E.G.*, RESULTS ARE WITHIN THE LIMITS SPECIFIED BY REGULATIONS), DATA REPORTS WHICH SET FORTH PARAMETERS FOR OTHERS TO USE IN THE EXECUTION OF THE PROJECT DESIGN (*E.G.*, RECOMMENDATIONS FOR EARTH PRESSURES STRENGTH, MODULUS, GRADIENTS, TRANSMISSIVITY, *ETC.*), LETTERS, EMAILS, MEMORANDA, CALCULATIONS AND ANALYSES, SPECIFICATIONS, DRAWINGS AND, WHERE APPROPRIATE, EXPERT REPORTS OR TESTIMONY. Letters, data reports (including monitoring reports), emails, drawings (*e.g.*, boring location plan for permitting purposes), and memoranda, which transmit solely factual information, and standard Phase I Environmental Site Assessment proposals, are excluded from the review requirements of this policy.

B. PURPOSE

The purpose of this policy is:

1. To provide guidance in reviewing technical work products;

2. To define the role, requirements, and responsibilities of the reviewer; and

3. To maintain a consistent quality work product in all GZA offices.

C. SCOPE

1. This policy applies to all GZA operating companies and affiliates.

D. ASSOCIATED DOCUMENTS

Policy No. 01-4001 – Project File Management

Policy No. 02-6001 – Professional Registration, Certifications and Licensing and Corporate Licensing

Policy No. 04-0100 – QA/QC Overview Policy (In Development)

Policy No. 04-0020 – Technical Reports; Loss Prevention

Policy No. 05-0100 – Contract and Proposal Policy: Summary

E. BACKGROUND

1. Project Managers (PMs) and Principals-in-Charge (PICs) are intimately involved in proposal preparation and project execution. The associated pressures may result in overlooking some broad technical issue, regulatory requirement or loss prevention factors. Hence, it is required to have a third party review of the work product by an objective, experienced technical person throughout the execution of the project starting with the proposal stage. It's preferred this function be provided by an in-house C/R for the purpose of obtaining an unbiased opinion of the project's technical progress (see paragraph F.4 for a description of who should perform the role of a C/R). To verify that the work product is reviewed, the C/R must, for draft documents, issue an email he has reviewed the document before it can be sent. For final documents, sign the document, if at all possible, with at least one original signature. .

2. The general intent of the C/R review is to assure that our work products are technically correct, meets contract requirements and that appropriate wording is included to identify risks and uncertainties, limit claims and avoid misunderstanding by the Client.

F. POLICY

1. All project documents as defined in A.2, which require a principal's signature, must also be reviewed and signed by a C/R before they are sent to the Client in final form.

2. **Consultant/Reviewer (C/R) Selection:** The C/R should be identified at the proposal stage of the project and be kept actively involved throughout the progress of the work and until the completion of the final project document. The PIC shall select a C/R to review <u>all</u> professional work products, including proposals and contracts (excluding MSAs), on the subject project. The C/R is required whenever a PIC's signature is required and the document expresses an opinion, presents critical project information, presents interpretations, calculations or conclusions, or provides recommendations. Except as noted below, the C/R shall be a senior staff member; an Associate Principal or above with the appropriate professional licensure, technical expertise and experience necessary to address the project demands. For projects where the PIC is working outside of the PIC's expertise, the C/R must be an Associate Principal or above, who works within the required discipline. In situations where the PIC holds the required license, but extraordinary circumstances exist, *e.g.*, there is only one principal in an office or there is no principal available within the region with the proper expertise, the C/R should be the most technically qualified member of the staff at or above Project Manager level (preferably a Senior consultant or Senior Project Manager) who is licensed in the technical discipline which pertains directly to the work. Use of a C/R below principal level must be approved by the appropriate DOM or ROO.

For projects encompassing several diverse and distinct disciplines, it may be appropriate to have more than one C/R. This decision should be made at the proposal stage in concert with the project team and DOM.

As an absolute last resort, the PIC may, with the approval of the DOM and ROO, engage a suitably qualified consultant from another firm to conduct a peer review. Since it is not appropriate for a representative of an outside firm to sign a GZA document, a document summarizing the consultant's findings must be included as a reference and identified as such in the report. In addition, a copy of the outside firm's comments along with written documentation on how the comments were resolved by the PIC must be included in the permanent project files

In situations where the PIC is the DOM, any exceptions to this policy must be approved by the responsible ROO. Any material, substantive departure from this mandate will be considered a violation of this policy.

3. **Document Signatures**: Since GZA's inception, it has been GZA's standard of practice that all project documents submitted to a Client (and filed in accordance with Policy 01-4001) must bear the signatures of the project's PIC. In addition, and if at all possible, all GZA signatures on a project document (document) should be original. For those documents requiring a C/R signature (refer to Policy 04-0200, Section A.2), either the PIC or C/R must provide an original, handwritten signature or an encrypted digital signature (see further requirements below) before any document is sent to the client and/or to permanent project files. In extraordinary circumstances, a scanned signature may be used.

The appropriate uses of encrypted digital signatures, alternate signatories, and scanned signatures as well as the treatment of signatures on draft documents are summarized below:

> Encrypted Digital Signatures: If circumstances warrant (via contract, Client or regulations), a properly encrypted digital signature may be used in lieu of an original signature. A digital signature must have an electronic authentication process (private key) attached to it such that it can only be associated with the signatory, is capable of verification, and is linked uniquely to the underlying documents in a manner that invalidates the signature if any part of the document is changed. The digital certificate and associated private key used to digitally sign the documents must be under the sole and exclusive control of the signatory. Facsimile or scanned signatures are not deemed to comply with this requirement. (Note: PIC's shall review the State Licensing Board's statutes of the State within which the project is located, to ensure that the manner in which an electronic signature is used is in accordance with that State's requirements.)
>
> Alternate Signatory: If another senior staff member is asked to sign for the PIC or C/R, they must first obtain an email from the PIC or C/R authorizing the action. The email must indicate that the signatory has reviewed the document and identifies the document by project name, project number, the date and type of document (*e.g.*, memo, report, drawing, *etc.*).
>
> Scanned Signatures: If any signature on a document is a scanned signature, the signatory must authorize the use by an email to the PIC, C/R, and the individual finalizing the document for submittal to the client. The email must indicate that the signatory has reviewed the document and identifies the document by project name, project number, the date and type of document (*e.g.*, memo, report, drawing, *etc.*)
>
> Draft Documents: Any draft document being sent to a client shall be without signatures. For draft documents, the C/R must review the document and issue an email confirming they have reviewed it prior to submitting the draft to the client.

Any deviation from these requirements must be approved by the DOM and/or ROO.

4. Emails that qualify as "professional work product" (as defined above) should also be reviewed by the C/R (as well as the PM and PIC) prior to being transmitted to the Client. In certain instances, it may not be practical to have the C/R review the email prior to transmission. In such circumstances the opinions should be presented as preliminary or draft in nature, include appropriate limitations and/or assumptions and be CC'd to the C/R of the project

5. The C/R should concentrate primarily on the technical approach, technical recommendations, accepted standard of care, and loss prevention. It remains the responsibility of the PM and PIC to ensure that computations have been appropriately checked, that all data used to develop the project opinions and recommendations have been checked for consistency and accuracy, that work product format, organization and grammar are in accordance with GZA standards, and that the work product adequately addresses the Client's needs and entire scope of work stated in the contract.

6. The PIC and C/R shall work together to resolve differences of opinion, with the final work product reflecting the consensus of the PM, PIC, and C/R. In the rare instance when the PIC and C/R cannot reach agreement, the PIC

and C/R shall seek the help of a qualified GZA Principal or Senior Principal with the appropriate technical background and expertise to resolve the issue. It is the responsibility of the PIC and PM to bring to the attention of the C/R any comments or edits made by the C/R with which they may take issue so they may be resolved to everyones' mutual satisfaction.

7. In accordance with Policy 01-4001 Project File Management, No written record of the C/R comments shall be maintained in GZA's files. ALL DRAFT COPIES AND COMMENTS MUST BE DISCARDED AS SOON AS THEY ARE NO LONGER NEEDED FOR FINAL WORK PRODUCT DEVELOPMENT. The PM is responsible to see that written documentation of completed reviews is maintained in project files only in the form of the C/R's signature on the work product or on a cover sheet. While comments on drafts are part of the ordinary work product development, review comments shall not be retained in the project files (Refer to Policy 01-4001). Comments by technical reviewers can easily be misrepresented by others. All comments must be resolved before the work product is finalized. THEREFORE, DELETE FROM ALL GZA FILES (INCLUDING PM AND PIC HARD DRIVES), ALL REVIEW COMMENT NOTES AND DRAFT COPIES ONCE THE DOCUMENT IS FINALIZED. SAVE ONLY THE FINAL COPY.

8. DO NOT MAKE NOTATIONS IN FINAL COPIES. If an error or change is identified in a document that is already issued final, do not simply note the change in the final copy. After reaching consensus with the C/R, issue a change document (revision page or letter) to all recipients so that the correction is clearly documented.

G. RESPONSIBILITIES

1. The PIC is responsible to the Client for providing a quality, work product that addresses the Clients needs and is protective of GZA's collective interests (*e.g.*, Standard of Care, loss prevention, *etc.*). The PIC is also responsible for making sure the professional work product is appropriately reviewed by the designated C/R and their comments are satisfactorily addressed.

2. The PM is responsible to the PIC for seeing that the steps necessary to assure the quality of our work product have been executed. These steps include, as a minimum:

- verifying that all calculations and data have been independently checked by technically qualified staff;
- proofreading the final text (spelling and format check);
- report tables and figures have been reviewed for content and accuracy;
- reviewing the assembled work product originals, including text, figures, tables, logs, laboratory test reports to ensure all final revisions have been incorporated; and
- reviewing the assembled copy of the work product to ensure that printing is clear and clean, all pages are included in proper order, and all signatures are applied.

This does not mean that the PM must personally perform all these steps, but the PM must verify that the qualified staff they delegate to the task have made the required reviews.

3. The C/R is responsible for reviewing the work product to ensure that the technical approach is appropriate and sound given the stated issues and objectives, that the work meets the accepted standard of care, and that the work is protective of both GZA's and the Client's collective interests.

4. The DOM and ROO are responsible for evaluating and approving any exceptions to this Policy which are the result of either specific project requirements or client demands.

H. PREPARED BY:

This document was originally prepared by N.A. Campagna (as 06-0100), and subsequently revised by M.M. Shaw, M.A. Powers, N.A. Campagna and the RMC (2011). Refer questions, comments or recommendations to the Director of Professional Practice, and/or the Vice President of the Risk Management Department.

GZA's Affirmative Action Statement (Plan), dated April 1, 2016, follows.

AFFIRMATIVE ACTION STATEMENT
GZA GEOENVIRONMENTAL, INC.

INTRODUCTION

All information in this Plan, including salary information, total level of employment, and other statistical data, is confidential and may not be released to any third party without the consent of GZA GeoEnvironmental, Inc.

The terms "underutilization" and "goals" are used only to comply with Affirmative Action regulations and are not an admission of any illegal or discriminatory activity.

POLICY STATEMENT

GZA GeoEnvironmental, Inc. prohibits discrimination in employment on the basis of race, color, religion, creed, citizenship status, marital status, national origin, ancestry, sex, sexual orientation, gender identity, Vietnam Era Veteran status, age and disability.

I, William E. Hadge, the President and CEO of GZA GeoEnvironmental, Inc., recognize that when the effects of employment practices, regardless of their intent, discriminate and create adverse impact against any group of people, action must be taken to ensure that the Company under the legal authority of: Massachusetts General Laws Chapter 151B; Executive Order 478; the Equal Pay Act of 1963; Title VI and VII of the Civil Rights Act of 1964; the Age Discrimination in Employment Act of 1967; the Equal Employment Opportunity Act of 1972; the Civil Rights Act of 1992; Section 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; the Family and Medical Leave Act of 1993, I commit myself and my employees, within the context of these laws, to ensure equitable participation of minorities, women, Vietnam Era Veterans and persons with disabilities in all of its daily operations. This policy applies to all employment practices and employment programs sponsored by this Company. The Company shall review, investigate, and where necessary, initiate changes in it processes relative to the facilities and programs accessible to the public, including the provision of reasonable accommodation for persons with disabilities. This policy shall also apply to the areas of recruitment, selection, promotions, termination, transfers, layoffs, compensation, training, benefits, reasonable accommodation and other terms and conditions of employment.

I have designated Kathleen A. Murphy as Diversity Director/Officer to implement all elements of this Equal Opportunity/Affirmative Action (EO/AA) program. All management employees have personnel responsibility, and shall be designated specific tasks, relative to ensuring its successful implementation. All personnel shall be evaluated on the success of this program the same was as their performance is evaluated relative to other Company goals.

William E. Hadge
Chief Executive Officer and President

Kathleen A. Murphy, MHR, PHR
Director of Human Resources

Date: April 1, 2016

REVIEW OF PERSONNEL PROCESSES

GZA reviews annual its personnel processes to determine whether its present procedures assure careful, thorough and systematic consideration of the qualifications of known qualified individuals with disabilities and qualified protected veterans. This review covers all procedures related to the filling of job vacancies either by hire or by promotion, as well as all training opportunities offered or made available to employees.

In determining the qualifications of veterans, GZA limits its consideration of a qualified protected veteran's military record, including discharge papers, to only that portion of the record which is relevant to the specific job qualification for which the veteran is being considered.

Based upon GZA's review of its personnel processes, GZA will modify the personnel processes when necessary, and will include the development of new procedures in this Affirmative Action Program to ensure equal employment opportunity. To date, no modifications have been necessary.

REVIEW OF PHYSICAL AND MENTAL QUALIFICATIONS STANDARDS

The Company has adhered to a schedule for the review of all physical and mental job qualification requirements to ensure that, to the extent qualification requirements tend to screen out qualified handicapped individuals or disabled veterans, they are job related and consistent with business necessity and the safe performance of the job.

The review of the technical jobs was completed in April 2016.

The review of the non-technical jobs was completed in April 2016.

Since the conclusion of the review, all job descriptions for new or changed jobs are reviewed when submitted to the Human Resources Department for their compliance with the above requirements.

If the Company applies physical or mental job qualification requirements in the selection of applicants or employees for employment or other change in employment status such as promotion, demotion or training, to the extent that qualification requirements tend to screen out qualified handicapped individuals or disabled veterans, the requirements are related to the specific job or jobs for which the individual is being considered and are consistent with business necessity and the safe performance of the job.

The Company conducts a comprehensive medical examination prior to employment. The results of such an examination are used only in accordance with the requirements of this section. If the Company inquires into an applicant's or employee's physical or mental condition or conducts a medical examination prior to employment or change in employment status, information obtained in response to such inquiries or examination shall be kept confidential except that:

(i) Supervisors and managers may be informed regarding restrictions on the work or duties of handicapped individuals or disabled veterans and regarding accommodations; and

(ii) First aid and safety personnel may be informed, where and to the extent appropriate, if the condition might require emergency treatment; and

(iii) Government officials investigating compliance with the Act shall be informed.

REASONABLE ACCOMMODATION TO PHYSICAL AND MENTAL LIMITATIONS

The Company recognizes its obligation and does make a reasonable accommodation to the physical and mental limitations of an applicant or employee unless the Company is able to demonstrate that such an accommodation would impose an undue hardship on the conduct of its business. In determining the extent of the Company's accommodation obligations, the following factors, among others, are considered:

(1) Business necessity; and

(2) Financial costs and expenses.

HARASSMENT PREVENTION PROCEDURES

Employees of and applicants to GZA GeoEnvironmental, Inc. (GZA) will not be subject to harassment, intimidation, threats, coercion, or discrimination because they have engaged or may engage in filing a complaint, assisting in a review, investigation, or hearing or have otherwise sought to obtain their legal rights related to any federal, state or local law regarding EEO or qualified individuals with disabilities or qualified protected veterans. Any employees or applicants who feel that they have been subject to harassment, intimidation, threats, coercion, or discrimination because of their disability or status as a qualified protected veteran should contact the Director of Human Resources at (781) 278-3837 for assistance. This policy is communicated to all employees and supervisors annually; most recently on April 1, 2016 and a notice is posted in a common area.

EXTERNAL DISSEMINATION OF POLICY, OUTREACH AND POSITIVE RECRUITMENT

A. INTERNAL DISSEMINATION

1. The GZA GeoEnvironmental, Inc. manual contains our Affirmative Action/Equal Opportunity Compliance Program Policy Statement.
2. GZA GeoEnvironmental, Inc. publicizes the Program through applicable internal publications, including memos to employees.
3. Periodic meetings are held with executive and supervisory personnel to explain the intent of the Program, and the responsibility of each Company employee for effective implementation.
4. Supervisory personnel hold staff meetings to further implement and explain the Program to all other employees.
5. As a part of the GZA GeoEnvironmental, Inc. introduction procedure, each new employee is handed a copy of the Policy Statement, and after review by the new employee, an opportunity to ask questions is provided.
6. Notices are posted about EEO programs, progress reports, etc.
7. The Policy Statement covering our Affirmative Action/Equal Opportunity Compliance Program is posted on the Company bulletin board. An electronic version of the Policy Statement is posted on the Company intranet.
8. The Policy is discussed in management training programs.
9. Articles (and pictures) regarding accomplishments of employees who are qualified individuals with disabilities and qualified protected veterans shall be included in company and/or facility publications.
10. Existence of the Program is communicated to employees and such elements of the Program made available to employees to know of and avail themselves of its benefits.

B. EXTERNAL DISSEMINATION

1. GZA GeoEnvironmental, Inc.'s recruiting sources are informed about our EEO policy and are requested to actively recruit and refer Minority and Female applicants for all positions listed.
2. All employment advertising includes reference to our EEO policy.
3. The EEO clause is included in purchase orders and subcontracts.
4. Minority and Female organizations, community agencies, community leaders, secondary schools and colleges are notified of the Company policy.
5. Subcontractors, vendors and suppliers are notified of Company policy requesting appropriate action on their part.

AUDIT AND REPORTING SYSTEMS

1. GZA GeoEnvironmental, Inc. monitors and maintains records of applicants, offers, hires, promotions, training and terminations to ensure that its non-discriminatory policy is carried out.

2. GZA GeoEnvironmental, Inc. monitors performance toward equal employment opportunity objectives on a regular basis. The results of these audits are reported by the Director of Human Resources who discusses the reports with the manager of each of the offices covered in the reports. If any unit is not meeting its goals, an explanation is required so that an action plan can be developed.

3. Top management is advised about the Program's effectiveness and recommendations for improvement.

4. GZA GeoEnvironmental, Inc. submits documentation, as stated in section six, to substantiate efforts made and affirmative actions in an attempt to comply with the following:

    a. Specific Equal Employment Opportunity responsibilities

    b. Required Contract Provisions Federal Aid Construction Contracts

    c. A(76) Affirmative Action Requirements

    d. Training Special Provision

    e. Minority Business Enterprises as Subcontractors

    f. Standard Federal Equal Employment Opportunity Construction Contract Specification

    g. Nondiscrimination Clause

RESPONSIBILITY FOR IMPLEMENTATION OF AAP

A. Ms. Kathleen A. Murphy, Director of Human Resources, is responsible to the Affirmative Action/Equal Employment Compliance Program. In matters involving Equal Employment Opportunity, the Director of Human Resources reports directly to the Chief Executive Officer. The responsibilities, with the full support of top management, include, but are not necessarily limited to:

1. Establishing measurable and attainable goals regarding employment of Minorities and Females.
2. Developing policy statements, affirmative action programs, internal and external communication techniques.
   a. To ensure the Policy Statement and Program achieve compliance with the following applicable federal and state laws, regulations, executive orders and together with the EEO contract provisions contained in Department of Small Businesses Service/Division of Labor Services awarded contracts constitute a complete affirmative action program:
      i. Civil Rights Act of 1964 as amended
      ii. Presidential Executive Order 11246 as amended
      iii. Title 23 U.S.C. 140
      iv. Title 49 C.F.R. Part 23
      v. Governor's Executive Orders #3 and #17
      vi. The Americans with Disabilities Act of 1990
      vii. Public Act No. 91-58
      viii. Civil Rights Act of 1991
3. Assisting in the identification of problem areas.
4. Assisting management in arriving at solutions to problems.
5. Annually designing and implementing audit and reporting systems that will measure the effectiveness of the Program indicating the need for remedial action, and determining the degree to which the Program's goals and objectives have been attained.
6. Serving as liaison between the Company and enforcement agencies.
7. Serving as liaison between the Company and minority organizations, women's organizations, and community action groups concerned with employment opportunities for Minorities and Females.
8. Keeping management informed of latest developments in the equal opportunity area.

B. Line responsibilities include, but are not limited to:

1. Assistance in the identification of problem areas and establishment of goals and objectives.
2. Review of the qualifications of all employees to ensure Minorities, Females, handicapped individuals and Vietnam-era veterans are given full opportunities for transfers and promotions. This is to be done annually, at a minimum interval, plus at other intervals as required and customary in this firm.
3. Career counseling for all employees.
4. Conduct periodic reviews to ensure that Minority, Female, handicapped individuals and Vietnam-era veterans are afforded a full opportunity, and are encouraged to participate in all Company-sponsored educational training, recreational, and social activities.
5. Supervisors are made to understand that their work performance is being evaluated on the basis of the equal employment opportunity efforts and results, as well as other criteria.
6. Supervisors are responsible to take actions to prevent harassment of employees placed through affirmative action efforts.
7. The subject matters of 5 and 6 above are covered in meetings with supervisory personnel.

TRAINING TO ENSURE AAP IMPLEMENTATION

To establish availability factors for this Plan year, local, state and national data was used as a starting point, modified by the appropriate factors, according to federal guidelines. The Company believes these figures to be an accurate and true reflection of its current status.

To determine whether Minorities or Females are being underutilized in any Job Group, all of the following factors have been considered:

1. The Minority population and Females seeking employment in the labor area surrounding the facility.
2. The size of the Minority and Female unemployment force in the labor area surrounding the facility.
3. The percentage of the Minority and Female workforce as compared with the total workforce in the immediate labor area.
4. The general availability of Minorities and Females having requisite skills in the immediate labor area.
5. The availability of Minorities and Females having requisite skills in an area in which the Company is considered for all Job Groups which are filled by current employees.
6. The existence of training institutions capable of training persons in the requisite skills is important for several Job Groups.
7. The degree of training which the Company is reasonably able to undertake as a means of making all job classes available to Minorities and Females is considered in determining promotable and transferable candidates and uses the same data as Factor 6.

CONCLUDING STATEMENT

To summarize the Company's philosophy as contained in this Affirmative Action Plan:

The Company does, and will continue to, provide all applicants for employment and all employees with equal opportunity for employment and promotion regardless of race, color, religion, creed, citizenship status, marital status, national origin, ancestry, sex, sexual orientation, gender identity, Vietnam Era Veteran status, age and disability.

This commitment to equal opportunity includes all other personnel actions such as transfers, disciplinary and grievance procedures, layoffs, Company-sponsored training programs, rates of pay, educational reimbursement, social functions, and benefits.

Management at all levels will abide by federally mandated regulations in incorporating Affirmative Action into its procedures. There will be a good faith effort to increase the consideration, promotion, hiring, and effective utilization of Minorities and Females in all job categories and departments in accordance with the goals set forth in this Affirmative Action Plan. Minorities and Females will be encouraged to take advantage of the opportunities at the Company.

The Company intends to fulfill the spirit of Equal Opportunity and Affirmative Action by ensuring the Company's relationship with prospective and present employees is without bias.

William E. Hadge
Chief Executive Officer and President

Kathleen A. Murphy, MHR, PHR
Director of Human Resources

Immediately following are the required forms, fully executed:

- RFP Cover Page
- Collusion or Fraud Statement
- Tax Certification Affidavit
- Designer's Service - Bidder's/Proposer's Certification
- Bidders References Form (adopted)
- Acknowledgement of Addendum No. 1

CITY OF SPRINGFIELD, MASSACHUSETTS
OFFICE OF PROCUREMENT
36 COURT STREET, ROOM 307, SPRINGFIELD, MA 01103

Request for Proposals

RFP Number 18-010, On-Call Professional Engineering (Public Works Construction) Services

Will be received at the Office of Procurement until 2:00 P.M. August 9, 2017 and will be logged in at that time. Proposals received after the due date and time will be returned unopened.

All packages must be marked with Proposer's business name, the above RFP number and the due date.

By: **Lauren Stabile, Chief Procurement Officer**

This Request for Proposal is for: **On-Call Professional Engineering (Public Works Construction) Services** (Per the attached specifications)

As requested by: **Department of Capital Asset Management and Department of Parks, Buildings, and Recreation Management**

THIS FORM MUST BE COMPLETED, SIGNED, AND RETURNED WITH Proposal.

This Proposal is submitted by:

GZA GeoEnvironmental, Inc.
(Company Name)

1350 Main St. - Suite 1400, Springfield, MA 01103
(Company Address)

I acknowledge receipt of addenda numbered: 1, _____, _____, _____, _____, _____.

signed by:

Thomas E. Jenkins, P.E.
(Printed or Typed Name and Title)

08 / 11 / 2017
(Signature and Date)

Telephone Number: 413-726-2100

Fax: 413-732-1249

Email Address: thomas.jenkins@gza.com

COLLUSION OR FRAUD STATEMENT

THE UNDERSIGNED CERTIFIES UNDER PENALTIES OF PERJURY THAT THIS BID IS IN ALL RESPECTS BONA FIDE, FAIR AND MADE WITHOUT COLLUSION OR FRAUD WITH ANY OTHER PERSON. AS USED IN THIS SECTION THE WORD "PERSON" SHALL MEAN ANY NATURAL PERSON, JOINT VENTURE, PARTNERSHIP, CORPORATION OR OTHER BUSINESS OR LEGAL ENTITY.

Thomas Jenkins, P.E.

(NAME OF PERSON SIGNING BID)

(SIGNATURE)

GZA Geoenvironmental, Inc.

(COMPANY)

THIS FORM MUST BE SIGNED & RETURNED WITH YOUR BID OFFER. FAILURE TO SUBMIT THIS FORM MAY BE CAUSE FOR IMMEDITATE REJECTION

TAX CERTIFICATION AFFIDAVIT FOR CONTRACTS

Individual Social Security Number	04-2393851 State Identification Number	Federal Identification Number

Company: GZA GeoEnvironmental, Inc

P.O. Box (if any): ______ **Street Address Only:** 1350 Main St. - Suite 1400

City/State/Zip Code: Springfield, MA 01103

Telephone Number: 413-726-2100 **Fax Number:** 413-732-1249 **Email:** ______

List address(es) of all other property owned by company in Springfield: ______

Please Identify if the bidder/proposer is a:

Corporation X

Individual ______ **Name of Individual:** ______

Partnership ______ **Names of all Partners:** ______

Limited Liability Company ______ **Names of all Managers:** ______

Limited Liability Partnership ______ **Names of Partners:** ______

Limited Partnership ______ **Names of all General Partners:** ______

You must complete the following certifications and have the signature(s) notarized on the lines below. Any certification that does not apply to you, write N/A in the blanks provided.

FEDERAL TAX CERTIFICATION

I, Enda Fahey (authorized agent) certify under the pains and penalties of perjury that GZA (Bidder/Proposer), to my best knowledge and belief, has/have complied with all **United States Federal taxes** required by law.

GZA — Bidder/Proposer/Contracting Entity

[signature] — Authorized Person's Signature

Date: 7/28/2017

CITY OF SPRINGFIELD TAX CERTIFICATION

I, Enda Fahey (authorized agent) certify under the pains and penalties of perjury that GZA (Bidder/Proposer), to my best knowledge and belief, has/have complied with all **City of Springfield taxes** required by law(has/have entered into a Payment Agreement with the City).

GZA — Bidder/Proposer/Contracting Entity

[signature] — Authorized Person's Signature

Date: 7/28/2017

COMMONWEALTH OF MASSACHUSETTS TAX CERTIFICATION

Pursuant to M.G.L. c. 62C §49A, I, Enda Fahey (authorized agent) certify under the pains and penalties of perjury that GZA (Bidder/Proposer), to my best knowledge and belief, has/have complied with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

GZA — Bidder/Proposer/Contracting Entity

[signature] — Authorized Person's Signature

Date: 7/28/2017

Notary Public

~~STATE OF~~ ______ *See the Notarial certificate stapled to the back of this document.* [initials] 7/28/17 ~~2017~~

~~County of~~ ______, ~~ss.~~

~~Then personally appeared before me [name]~~ ______, ~~[title]~~ ______ ~~of [company name]~~ ______, ~~being duly sworn, and made oath that he/she has read the foregoing document, and knows the contents thereof, and that the facts stated therein are true of his/her own knowledge, and stated the foregoing to be his/her free act and deed and the free act and deed of [company name]~~ ______.

______
~~Notary Public~~

~~My commission expires:~~ ______

YOU MUST FILL THIS FORM OUT COMPLETELY AND, SIGNATURES MUST BE NOTARIZED ON THIS FORM AND YOU MUST FILE THIS FORM WITH YOUR BID/CONTRACT. TAX AFFIDAVITS THAT ARE NOT SIGNED AND NOTARIZED MAY BE REJECTED.

MASSACHUSETTS JURAT

Gov. Exec. Ord. #455 (03-13), §5(e)

Commonwealth of Massachusetts
County of Norfolk } ss.

On this the 25th day of July, 2017, before me,
William A. Roche, the undersigned Notary Public,
personally appeared Enda P. Foley,
proved to me through satisfactory evidence of identity, which was/were
Personal Knowledge,
to be the person(s) whose name(s) was/were signed on the preceding or attached document in my presence, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her/their knowledge and belief.

WILLIAM A. ROCHE
Notary Public
Massachusetts
Commission Expires May 11, 2023

Signature of Notary Public

William A. Roche
Printed Name of Notary

My Commission Expires May 11, 2023

Place Notary Seal and/or Any Stamp Above

OPTIONAL

Although the information in this section is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Tax Certification Affidavit & the Commissioner Federal Tax Certification

Document Date: _____ Number of Pages: 2

Signer(s) Other Than Named Above: _____

Right Thumbprint of Signer
Top of thumb here

DESIGNER'S SERVICE
BIDDER'S/PROPOSER'S CERTIFICATION

The undersigned bidder/proposer hereby certifies he/she will comply with the minority/women workforce percentage ratio and specific affirmative action steps contained in this contract and will make good faith best efforts to comply with the Minority/Women Business Enterprise goals under these contract provisions, as well as all other requirements deemed necessary by the Contract Compliance Officer for this type of contract.

NAME OF PROJECT On Call Professional Engineering (Public Works Construction) Services BID NO. 18-010

Is your company at least 51% owned and controlled by one of the following groups members? Please check the appropriate categories.

MALE X	Black	Asian
	Hispanic	Caucasian X
	Alaskan Native	Cape Verdean
FEMALE	American Indian	

Signature of Bidder/Proposer (authorized representative)

HR Generalist
Title

GZA GeoEnvironmental, Inc.
Name of Firm

August 9, 2017
Date

THE AWARDING AUTHORITY MAY REJECT ANY BID/PROPOSAL NOT ACCOMPANIED BY THIS CERTIFICATION. THIS FORM MUST BE SUBMITTED BY THE BIDDER WITH THE BID/PROPOSAL, AND SIGNED BY THE BIDDING COMPANY IF THE REQUIRED INFORMATION IS PROVIDED OR NOT.

BIDDERS REFERENCE FORM

The references provided below can speak to GZA's quality and performance for the predominance of similar project work conducted by GZA's Springfield office over the last five years. Other references for less extensive similar work in other municipalities can be provided upon request.

City of Springfield – Department of Parks, Buildings, and Recreation Management
Patrick J. Sullivan, Executive Director
200 Trafton Rd
Springfield, MA 01108
413-787-6440
psullivan@springfieldcityhall.com
Dates worked: 1993 - Present
Description of work performed: GZA (and formerly Baystate Environmental Consultants, Inc. [BEC]) has worked with Patrick Sullivan on a multitude of City Parks projects over the last 25+ years.

City of Springfield – Department of Capital Asset Construction
Peter J. Garvey, Director
36 Court Street – Room 312
Springfield, MA 01103
413-787-6445
pgarvey@springfieldcityhall.com
Dates worked: 2015 - Present
Description of work performed: Since his joining the City of Springfield in 2015, GZA has worked with Peter Garvey on a number of City projects demonstrating the full range of GZA's capabilities and services.

City of Springfield – Department of Parks, Buildings, and Recreation Management
Laura Walsh, Project Manager, Therapeutic Recreation Coordinator
200 Trafton Road
Springfield, MA 01108
413-886-5186
lwalsh@springfieldcityhall.com
Dates worked: 2013 - Present
Description of work performed:
GZA has worked on several projects for the Department of Parks, Buildings, and Recreation Management over the last several years on which Laura Walsh was the Project Manager. Notable completed projects include North Riverfront Park, Camp STAR Angelina – Phase I Improvements and the Outdoor Amphitheater, Mary Troy Park, and numerous other smaller projects.

City of Springfield - Department of Public Works
Chris Cignoli, P.E., Director
70 Tapley St.
Springfield, MA 01103
413-750-2808
ccignoli@springfieldcityhall.com
Dates worked: 2010 - Present
Description of work performed: GZA has not performed recent services directly for the Springfield Department of Public Works; however, our work in Springfield, for both the City and for private developers, is often reviewed by DPW. We work alongside DPW staff on many assignments for the City, and Mr. Cignoli can speak to our effectiveness and utility to the City of Springfield and our private clients who conduct business in Springfield.

Please acknowledge receipt of this addendum by signing below and returning to this office via facsimile to (413) 787-6295.

Signed: _____

Company: GZA

(please print)

END OF ADDENDUM NO. 1

Exhibit C

GZA
Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

1350 Main Street
Suite 1400
Springfield, MA 01103
T: 413.726.2100
F: 413.732.1249
www.gza.com

August 11, 2017
15.P000053.18

City of Springfield
Office of Procurement
36 Court Street – Room 307
Springfield, Massachusetts 01103

Attention: Lauren Stabilo, Chief Procurement Officer

RE: **PRICE PROPOSAL** for Professional Services
RFP No. 18-010
On-Call Professional Engineering Services (Public Works Construction)

Dear Ms. Stabilo:

GZA GeoEnvironmental, Inc. (GZA) is pleased to submit to the City of Springfield our PRICE PROPOSAL to provide On-Call Professional Engineering Services as outlined in your Request for Proposals (RFP No. 18-010, July 27, 2017).

GZA and our subconsultants offer our services in accordance with the terms and conditions included by example as Exhibit A of the RFP and in accordance with the enclosed schedules of fees. GZA will hold these schedules of fees for the initial one-year term of any contract resulting from RFP No. 18-010. Furthermore, barring any unforeseen circumstances, we anticipate holding these fees constant should any resulting contract be extended in accordance with the RFP.

We would welcome the opportunity to discuss this PRICE PROPOSAL with the Selection Committee. Should you have any questions, please contact Tom Jenkins at (413) 726-2121. Thank you for this opportunity to express our interest.

Very truly yours,
GZA GEOENVIRONMENTAL, INC.

Thomas E. Jenkins, P.E.
Project Manager / Principal-in-Charge

Guy P. Dalton, LSP
Associate Principal / Springfield Office Manager

Anja Ryan Duffy, P.L.A.
Project Landscape Architect

Paul G. Davis, Ph.D., PWS, CERP, CPSS
Principal / Environmental Scientist

enclosures

GZA GeoEnvironmental, Inc.
SCHEDULE OF FEES – City of Springfield

LABOR	***Per Hour***
Senior Principal Engineer / Scientist	$280
Principal Engineer / Scientist	$260
Associate Principal Engineer / Scientist	$240
Senior Consultant	$200
Senior Project Engineer / Scientist	$175
Senior Designer / Landscape Architect	$160
Project Engineer / Scientist	$150
Assistant Project Engineer / Scientist	$125
Staff Engineer / Scientist I	$105
Staff Engineer / Scientist II	$ 95
Technician I	$ 85
Technician II	$ 80
Senior CAD / Technical Designer	$130
CAD/Technical Designer	$110
Technical/Administrative Support	$ 80
Outside Services and Subcontractors	Cost Plus 5%
Expenses	Cost

The above rates for technical and support personnel will be charged for actual time worked on the project, including 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.

The above-listed rates are valid for the calendar year in which the work is performed. GZA will modify this rate schedule on an annual basis per the contract-specific cost of living adjustment procedure.

EXPENSES

- *Laboratory service, rental of specialized field or monitoring equipment and vehicle charges based on GZA standard unit prices*
- *Transportation, lodging and subsistence for out-of-town travel*
- *Printing, reproduction, plotting, and wide-format scanning*
- *Express mail and shipping charges*
- *Project-specific computer hardware and software*

APPLICABILITY

This Schedule of Fees is appropriate for use with assignments resulting from City of Springfield RFP No. 18-010

2017 Hourly Rates – New England

CLASSIFICATION	BILLABLE RATE	QUALIFICATIONS OF PERSONNEL
Project Assistant	$65.00	
Engineering Intern	$50.00	
Survey Assistant	$75.00	
Surveyor	$83.00	(Licensed, 15-20 yrs. exp.)
Senior Surveyor	$128.00	(Licensed, 20 + yrs. exp.)
Technologist II	$85.00	(Drafter, 1-5 yrs. exp.)
Senior Technologist	$108.00	(Drafter, 5-10 yrs. exp.)
Construction Representative I	$85.00	
Construction Representative II	$120.00	(Construction Manager, 10-25 yrs. exp.)
Construction Representative III	$130.00	
Designer I	$78.00	(Degreed Engineer, 1-3 yrs. exp.)
Designer II	$104.00	(Degreed Engineer, 3-6 yrs. exp.)
Senior Designer	$90.00	(Associates/Technical Degree, 6-15 yrs. exp.)
Project Engineer I	$100.00	(Licensed Engineer, 5-8 yrs. exp.)
Project Engineer II	$126.00	(Licensed Engineer, 8-20 yrs. exp.)
Senior Project Engineer	$130.00	(Licensed Engineer, 25+ yrs. exp.)
Project Manager I	$130.00	(Licensed Engineer, 10-20 yrs. exp.)
Project Manager II	$160.00	(Licensed Engineer, 20-25 yrs. exp.)
Senior Project Manager	$167.00	(Licensed Engineer, 25+ yrs. exp.)
Principal-in-Charge	$195.00	(Licensed Engineer, 30+yrs exp.)

DIRECT REIMBURSABLE EXPENSES

Travel	IRS Approved Rate
Overnight/Special Delivery Postage	At Cost
Special Equipment Rental	At Cost
Tolls/Parking	At Cost

- **Alfred Benesch & Company** does not charge additional hourly rates for Accounting or Administrative functions.
- The above rates are all inclusive; there are no extra charges or fees.
- Rates are good through December 31, 2017

HERITAGE SURVEYS, INC.

Professional Surveyors and Engineers
241 College Hwy & Clark St, P O Box 1
Southampton, Massachusetts 01073-0001

Bruce A. Coombs, President
Professional Surveyor, MA, CT & VT
E-mail: bruce@heritagesurveys.com

Telephone (413) 527-3600
Facsimile (413) 527-8280
Website: heritagesurveys.com

SCHEDULE OF FEES

EFFECTIVE JANUARY 1, 2017

Heritage Surveys, Inc established in 1975, provides complete surveying, mapping, and survey-related engineering services to a variety of residential, commercial, industrial, and municipal clients. The firm also works closely with other firms or individuals engaged in the professions of law, architecture, landscape architecture, civil and environmental engineering, forestry, photogrammetry, or similarly aligned professions. A team of experienced professionals can be assembled to handle your project from the planning stage through final design and construction.

The following rates for services include wages and employee benefits, as well as normal overhead or business operating expenses for items such as; office facilities, vehicles, electronic measuring and computer equipment, building and equipment maintenance, administrative services, legal and accounting services, and various types of insurance. Fee cost estimates for a specific scope of services will be provided upon request.

PERSONNEL:

2-Man Survey Party	$130.00 per hour
3-Man Survey Party	$160.00 per hour
Principal	$175.00 per hour
Project Manager	$115.00 per hour
Professional Land Surveyor	$120.00 per hour
Associate Surveyor	$95.00 per hour
Professional Engineer	$150.00 per hour
Associate Engineer	$95.00 per hour
Researcher	$95.00 per hour
CAD Operator	$85.00 per hour
Word Processor	$60.00 per hour
Consultants	Cost plus 15%

EXPENSES:

Mileage	$ .60 per mile
Print paper	$ 1.50 per square foot
Mylar	$ 4.50 per square foot
Other project related expenses such as stakes, monuments, postage, etc.	Cost plus 15%

RDK
ENGINEERS
380 Russell Street | Hadley, MA 01035
P: 413-387-4640 | F: 413-387-0197

RDK understands how engineering affects people

STANDARD RANGE OF HOURLY RATES

For services performed from December 1, 2016 to December 31, 2017

Principal I – Executive Principal	$180.00	to	$360.00
Chief Engineer	$170.00	to	$295.00
Group Leader I – III	$195.00	to	$335.00
Senior Project Manager I – III	$155.00	to	$195.00
Project Manager/Senior Engineer I – II	$140.00	to	$250.00
Senior Engineer I – V	$130.00	to	$225.00
Engineer I – V	$ 85.00	to	$170.00
Senior Designer I-II	$140.00	to	$155.00
Design Technology/BIM Manager	$130.00	to	$140.00
Designer I – IV	$ 80.00	to	$145.00
CAD Technician	$ 75.00	to	$125.00
Document Manager	$ 55.00	to	$ 90.00
Specification Typist	$ 55.00	to	$ 90.00

Exhibit D

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/4/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Risk Strategies Company
160 Federal St. 2nd Floor
Boston, MA 02110

CONTACT NAME:
PHONE (A/C, No, Ext): 617-330-5700 FAX (A/C, No): 617-439-3752
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Great Divide Insurance Company/ Nautilus Ins Group	25224
INSURER B : The First Liberty Insurance Corp	33588
INSURER C :	
INSURER D : Hartford Casualty Insurance	29424
INSURER E : Lexington Insurance Company	19437
INSURER F :	

INSURED
GZA GeoEnvironmental, Inc.
1350 Main Street, Suite 1400
Springfield MA 01103

COVERAGES **CERTIFICATE NUMBER:** 38222521 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	✓ COMMERCIAL GENERAL LIABILITY	✓	✓	GLP2007957-14	2/28/2017	2/28/2018	EACH OCCURRENCE	$ 1,000,000
	☐ CLAIMS-MADE ✓ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 500,000
	✓ Deductible - $25,000						MED EXP (Any one person)	$ 10,000
	☐ per occurence BI/PD						PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 1,000,000
	✓ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$ 1,000,000
	☐ OTHER:							$
B	AUTOMOBILE LIABILITY	✓	✓	AS2-Z11-261208-017	2/28/2017	2/28/2018	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	✓ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	✓ HIRED AUTOS ONLY ✓ NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	☐ UMBRELLA LIAB ☐ OCCUR						EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N	N/A		08WBRI5941	2/28/2017	2/28/2018	✓ PER STATUTE ☐ OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBEREXCLUDED? [N] (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
E	Professional Liability			031711017	2/28/2017	2/28/2018	Each Claim/ $2,000,000 Aggregate $2,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: Job #15.0166621.00, City of Springfield On Call Eng/DPW#20180195, DPBRM-Parks and DCAC Engineering Services, Springfield, MA. City of Springfield is included as an additional insured with respects to General Liability and Auto Liability per policy provisions and where required by signed contract. Waiver of Subrogation applies in favour of City of Springfield with respect to General Liability and Auto Liability per policy provisions and where required by signed contract.

CERTIFICATE HOLDER

15.0166621.00

City of Springfield
Office of Procurement
36 Court Street, Room 307
Springfield, MA 01103

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Michael Christian