COUNCIL of GOVERNMENTS
CENTRAL NAUGATUCK VALLEY
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Qualification Statement Submittal Form for Regulatory Dam Inspection Services and Other Dam Safety Related Engineering Services

Please save this document locally, fill in all applicable fields, and attach to your submittal e-mail.

A. Company Contact Information:

Company Name:	Tighe & Bond, Inc.		
Street Address:	1000 Bridgeport Avenue, Suite 320	City:	Shelton
		State:	CT
		Zip Code:	06484
		Phone:	203.712.1100
		E-Mail:	DCHuff@tighebond.con
Web Address:	www.tighebond.com	Primary Contact:	Dana C. Huff, P.E.

Is this company registered to practice as a Professional Engineering Corporation in the State of Connecticut? ☒ YES ☐ NO

CT Registration#: PEC0000398

B. Company Description:

Tighe & Bond was founded in 1911 by James Tighe whose vision shaped the development of dams and water supplies for much of western Massachusetts. James Tighe reviewed the design and inspected construction of the 235-foot Cobble Mountain Dam in Westfield, the highest hydraulic fill earthen dam in the country in the 1920s. In the mid 1950's, the firm oversaw the construction of the Manhan Dam in Southampton, Massachusetts, creating the third largest reservoir in Massachusetts, as originally planned by James Tighe. Today, the 5 billion gallon Tighe-Carmody Reservoir bears his name. We take pride in our history with some of the largest and oldest dams in New England and our capabilities in providing clients with high quality dam and levee engineering services even today.

Tighe & Bond is a leader in dam and levee consulting in New England with an experienced team of professionals that work to develop cost effective solutions and a clear project scope. While focused on public safety, our project teams are also sensitive to potential environmental impacts and preserving historical and aesthetic features of existing structures. We have provided services on more than 2,000 dam and levee projects ranging from simple visual inspections and verification of jurisdiction to levee certification and design of multimillion dollar dam rehabilitation projects. We have complete in-house capabilities to address civil, structural, electrical, mechanical, hydraulic, hydrologic, and complex regulatory permitting issues related to dams and levees.

Below is a complete list of dam and levee related services that Tighe & Bond provides its clients.
- Engineering Evaluations: Dam breach analysis; Design storm routing; Downstream inundation mapping; Hydraulic / hydrologic analysis; Slope Stability; Subsurface Investigations; Structural Analysis; Visual Inspection; Water supply
- Design and Construction: Construction administration; Construction observation; Dam removal; New construction; Project bidding assistance; Project certification; Record plans; Rehabilitation projects; Stormwater / flood control systems; Stream restoration; Topographic / Bathymetric Surveys
- Inspections: Conduits; Dam features and conditions; Jurisdictional and Ownership Determination; Submerged structures
- Permitting & Mitigation: Dam safety; FERC licensing compliance; Historical / archeological / cultural resources; Rare and endangered species; Water quality / dredging; Wetlands and waterways
-Sediment Removal: Evaluation of handling / disposal options for contaminated sediments; Quantification of bottom sediments; Sampling and characterization
-Additional Services: Emergency Action Plans; Levee Certification Assistance; Loan and grant applications; Operation & maintenance plans

C. Staff Information

For key staff members that may be assigned dam safety related tasks, please provide the following information. For each staff member listed, attach a current resume to the submittal e-mail.

Staff 1 Name:	Dana C. Huff, P.E.	Title:	Vice President		
Primary Duties:	Principal-in-Charge – Responsible for overall pr	Connecticut P.E. License #:	28159		
		Relevant Years Experience:	36	Resume Attached	☒
Staff 2 Name:	Francis J. Hoey III, P.E., LEED AP	Title:	Senior Vice President		
Primary Duties:	Technical Advisor – Design guidance and quality	Connecticut P.E. License #:	21807		
		Relevant Years Experience:	25	Resume Attached	☒
Staff 3 Name:	Christopher D. Haker, P.E.	Title:	Principal Engineer		
Primary Duties:	Engineer – Leads project's vision and design. Pr	Connecticut P.E. License #:	28898		
		Relevant Years Experience:	19	Resume Attached	☒
Staff 4 Name:	Steven M. Sroka, P.E.	Title:	Senior Engineer		
Primary Duties:	Project Engineer – Leads project's vision, desigr	Connecticut P.E. License #:	---		
		Relevant Years Experience:	18	Resume Attached	☒
Staff 5 Name:	Allison M. McCauliffe, P.E.	Title:	Project Engineer		
Primary Duties:	Leads project's design and execution. May serv	Connecticut P.E. License #:	23992		
		Relevant Years Experience:	15	Resume Attached	☒

D. Services:

Please check the box next to any service your firm is qualified to undertake and interested in providing. If your firm offers other specialized dam-related services, please list them in the space provided. In following sections you will be asked to explain qualifications and provide examples of previous work and references for each service you check or list.

Dam Inspection	☒	Inundation Modeling and Mapping	☒
Dam Emergency Action Plan Preparation	☒	Hydrologic and Hydraulic Studies	☒
Dam Operations and Management Plan Preparation	☒	Stability Analysis	☒
Dam Repair Plan Preparation	☒	Underwater Investigation	☒
Dam Removal Plan Preparation	☒	Dam Repair and Construction Monitoring	☒

Other Specialized Dam Safety Related Services:

E. Qualifications:

Please explain your firm's qualifications for each service checked or listed in section D.

Dam Inspections - A visual inspection dam is performed by an experienced licensed engineer. The inspection is a visual observation that focuses on identifying apparent deficiencies. Observed conditions of concern are documented in writing and with photographs, when possible. The inspection is summarized in a report that provides general information regarding the dam, watershed, and downstream areas, observations made during our inspection, and recommendations to address observed deficiencies, if any. The report includes color photographs taken during the inspection, an inspection checklist listing observed conditions, and figures depicting the dam location, downstream areas, and watershed limits.

Inundation Modeling, Mapping and Emergency Action Plan Preparation - Tighe & Bond performs an analysis (often referred to as a dam break analysis) to estimate downstream flood elevations in an uncontrolled dam failure situation. Results from this analysis can then be used to develop downstream inundation mapping to depict areas that get flooded as a result of the dam failure. These maps help determine the dam hazard classification. Dam break analysis results and inundation maps may be included as part of an Emergency Action Plan (EAPs). EAPs allow dam owners and local emergency responders to prepare and take actions before and during an imminent or actual dam failure. Tighe & Bond prepares and updates these EAPs on the dam Owner's behalf in an effort to protect public safety. Our EAPs are well respected by dam safety regulators and have been given to other consultants as an example of a properly prepared plan.

Dam Operations and Management Plan Preparation - Produce structure specific operation and maintenance items and the frequency these items should be performed. Vegetation control, water level management, debris control, animal control, exercising and maintenance of valves and gates, concrete and stone masonry maintenance, and erosion maintenance are covered in each Operation and Maintenance Plan. We also include checklists and forms for the Owner's use when performing regular, routine inspections.

Dam Repair Plan Preparation - Once the necessary inspections and analyses have been performed, it may become evident that repairs and rehabilitation of the dam or levee is required. Tighe & Bond utilizes its highly experienced engineering staff to implement standard engineering practice for dam and levee improvements, such as concrete and stone masonry repairs or replacement, seepage cut-off and/or collection, embankment stabilization, and gatehouse repairs or replacement. The designs are developed into contract documents suitable for bidding and construction purposes.

Dam Removal Plan Preparation - Assist the Owner with a public outreach program to discuss the benefits of dam removal to potentially abate concerns (and often misconceptions) about decreasing property values, insect infestations, and resource losses. Besides the potential public safety and cost benefits of dam or levee removal, we highlight the benefits of restoring the natural stream or river flow, potential re-establishment of historic, cold water fish passage, and creation of new wetland resources. The environmental benefits usually heavily outweigh the negative environmental impacts; so much so that Tighe & Bond has been successful at using dam removal as a mitigation measure to compensate for wetland resources losses related to a nearby dam rehabilitation project.

Hydrologic and Hydraulic Studies - Utilizes computer software to evaluate the capacity of the dam's spillway and/or outlet structure to determine if an over-topping potential may lead to dam failure. Information from this hydrologic/hydraulic analysis is used to prepare recommendations for increasing spillway capacity; such as raising the dam, widening the spillway, installation of spillway crest gates, or embankment overtopping protection, if necessary. Often times a combination of these techniques can be utilized to optimize the design for a cost effective solution. Most existing flood stage estimates come from flood insurance maps that were based on conservative, out-dated Hydrologic/hydraulic analysis techniques.

Stability Analysis – Perform seepage and stability analyses for earth embankment and concrete/stone masonry gravity dams using applicable design guidelines such as state regulations, FERC, Army Corps of Engineers, or US Bureau of Reclamation. These analyses are perform to ensure the dam has the minimum factor of safety required by these guidelines. When inadequate factors of safety result from these analyses, Tighe & Bond develops cost effective solutions to increase the dam's stability such as anchors, buttresses, slope flattening, seepage cutoffs, and/or seepage collection blankets and toe drains.

Underwater Investigations - Engage the services of a professional engineering diver to locate underwater structures, such as intake structures or pipes, and assess their condition. Pipelines can often be inspected using a camera-mounted, steerable pipe inspection crawler owned and operated by the diver. Diving inspections also often include observing the upstream face of the dam, where it's a concrete gravity dam or an earth embankment looking for signs of deterioration, limits of sediment build up, limits of slope protection such as rip rap, or seepage/leakage entrance points.

Dam Repair and Construction Monitoring - Provide construction administration and on-site construction observation. Services included are field checking of the Contractor's shop and working drawings and comparing them with the plans and specifications; checking for compliance with construction contract requirements; measurement and calculation of payment quantities; sampling and testing of materials; testing of completed facilities; and documenting Contractor's activities with well organized field reports and digital photographs.

F. Examples of Previous Work:

For each service checked or listed in section D, provide at least one comparable project completed by your firm within the past 10 years. Provide a brief description of the service rendered, the project name and location (Town and State), dam class, and a customer reference name and contact information (phone and/or e-mail)

Service Provided	Dam Name and Location	Dam Class	Customer Reference Name	Customer Reference E-mail/ Phone
Dam Inspection	On-Call Dam Engineering Various MA Locations	Low to High	MA DCR William Salomaa	617-626-1410 / William.Salomaa@State.MA.us
Dam Emergency Action Plan Preparation	Dams EAP Updates Peabody, MA	Sign. to High	Town of Peabody Will Paulitz	978-536-7117/william.paulitz@peabody-ma.gov
Dam Operations and Management Plan Preparation	Lower Mill Pond Dam Brewster, MA	Low	Town of Brewster Chris Miller	508-896-3701 / cmiller@town.brewster.ma.us
Dam Repair Plan Preparation	Lakeville #3 Dam Salisbury, CT	High	Aquarion Water Company Hetal Shah	203-337-5822 / hshah@aquarionwater.com
Dam Removal Plan Preparation	May Brook Dam Removal Windsor, CT	Low	Dalton Fire District Gibby Rudd	413-684-6124 daltonfiredist@aol.com
Inundation Modeling and Mapping	Dams EAP Updates Peabody, MA	Low to High	Town of Peabody Will Paulitz	978-536-7117/william.paulitz@peabody-ma.gov
Hydrologic and Hydraulic Studies	Linwood Pond Dam Northbridge, MA	High	Linwood Mill, LLC William Giannopoulos	508-864-7994 billgfdl@gmail.com
Stability Analysis	Whitney Pond Dam Winchendon, MA	High	Town of Winchendon John Deline	978-297-0170 / dpw@town.winchendon.ma.us
Underwater Investigation	Rockwood Lake Dam Greenwich, CT	High	Aquarion Water Company Hetal Shah	203-337-5822 / hshah@aquarionwater.com
Dam Repair and Construction Monitoring	Palmer Reservoir Dam Stonington, CT	High	Aquarion Water Co Carolyn Giampe	203-337-5908 / cgiampe@aquarionwater.com