COUNCIL of GOVERNMENTS
CENTRAL NAUGATUCK VALLEY
49 Leavenworth Street, Suite 303, Waterbury, CT 06702 · 203-757-0535 · cogcnv.org

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:	Macchi Engineers LLC		
Street Address:	44 Gillett Street	City:	Hartford
		State:	CT
		Zip Code:	06105
		Phone:	860-549-6190
		E-Mail:	nstone@macchiengineers.com
Web Address:	macchiengineers.com	Primary Contact:	Nancy Stone

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

CT Registration#: PEC. 0000720

B. Company Description:

Macchi Engineers established in 1945 is a Hartford-based, diversified engineering firm, serving public agencies and the private sector on civil and structural engineering projects. Since the 1960's, we have developed cost effective designs for repair and reconstruction of dams throughout the state. Various projects with the Inland Water Resources Department of the DEEP, and the Board of Fisheries and Game have involved hundreds of dams in Connecticut.

The storm of 1982 devastated several dams in the state, and the DEEP has, on an on-going basis retained Macchi Engineers for the repair of many of these structures. More recently, we have been involved in the inspection, evaluation and repair of privately owned dams in Bridgeport, Danbury, Fairfield, Farmington, Greenwich, Hamden, Simsbury, Stamford, Wallingford, and Wolcott. Services provided include:

- In-depth Field Inspections
- Inundation Mapping
- Hydrologic and Hydraulic Studies to develop optimum spillway configuration
- Draw Down Chamber and Gate Replacement
- New Concrete Spillway Design
- Impervious Clay Blanket Installation
- Dam Repair, Modification and Replacement
- Dam Emergency Operation Manuals
- Increase of Dam Heights
- DEEP Permit Document Management
- Full-time On-site Construction Administration and Inspection
- Underwater Investigations and Survey

We offer a full range of services required for dam repair projects including: field studies, hydrologic and hydraulic studies, preparation of plans and specifications, bid advisement and construction inspection. Additionally, we have the expertise to develop Emergency Operation Plans and Maintenance and Operation Manuals to insure proper facility operations in the event of flooding or failure.

Our engineers are fully experienced in utilizing computer programs from the U.S. Army Corps of Engineers and Soil Conservation Service for analysis and development of drainage designs. Similarly, they prepare numerous environmental applications to federal, state and local agencies in conjunction with many of these projects, and are very familiar with the appropriate design and review procedures.

Macchi Engineers is known for practical and economical designs for dam repair and reconstruction projects. We are sensitive to the natural beauty of these structures, and incorporate details to enhance the aesthetics of the surrounding area, whenever possible. This project approach has proved very successful, as it has led us to become one of the leading consultants for dam repair / rehabilitation in Connecticut.

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:	John Brochu	Title:	Principal, Senior Project Manager
Primary Duties:	Project Management/Coordinator	Connecticut P.E. License #:	PEN.0016687
		Relevant Years Experience:	28 Resume Attached ☒
Staff 2 Name:	Michael Plickys	Title:	Principal, Project Manager
Primary Duties:	Overview of design concept, client liaison	Connecticut P.E. License #:	PEN.0017241
		Relevant Years Experience:	27 Resume Attached ☒
Staff 3 Name:	Douglas Camp	Title:	Principal, Senior Project Engineer
Primary Duties:	Investigation and analysis, design of repairs	Connecticut P.E. License #:	PEN.0020359
		Relevant Years Experience:	20 Resume Attached ☒
Staff 4 Name:	Herbert S. May, Jr., P.E.	Title:	Chief Civil Engineer
Primary Duties:	Site,Grading,Layout,Erosion & Sediment Contro	Connecticut P.E. License #:	PEN.0025188
		Relevant Years Experience:	23 Resume Attached ☒
Staff 5 Name:	Johnathan Hurlburt	Title:	Structural Engineer
Primary Duties:	Inspection, design, construction administration	Connecticut P.E. License #:	
		Relevant Years Experience:	5 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	☒	Other Specialized Dam Safety Related Services:
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	☒	

E. Qualifications:

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

Dam Inspection

INSPECTION AND ASSESSMENT OF DAM

- Conduct physical inspection of dam and surrounding area, including but not limited to the embankments, spillway, drawdown structure, and downstream channel area.
- Identify and document any areas that may require remedial repairs.
- Summarize our findings in a letter report with photographs of areas in need of repair.
- Submit inspection findings to owner

Dam Emergency Action Plan Preparation

DEVELOP EMERGENCY OPERATIONS PLAN INCLUDING THE FOLLOWING:

- Non-storm inspection programs
- Identifying emergency condition events
- Storm alert and Dam monitoring
- Development of Early warning city to local municipalities
- Develop dam breach scenarios and analysis

Dam Operations and Management Plan Preparation

Develop an Operation and Maintenance Manual for use by the owner that will not only include recommended maintenance items but will also include warranties and operation manuals of the various components of the dam.

Dam Repair Plan Preparation

PRELIMINARY DESIGN PHASE

- Meet with State DEEP to discuss proposed repairs.
- Investigate the possibility of any protected or endangered species (flora or fauna) in the area. If found, incorporate protection practices in design drawings. (i.e. temporary relocation or protection barriers)
- Meet with owners' representative to discuss project requirements.
- Complete a detailed topographic survey to identify existing topographic features and construction access route including trees, existing contours, downstream channel and all other existing features.
- Complete a wetland delineation survey and locate wetland flags on topographic survey. Provide written report of wetland locations and surrounding soil types.
- Complete a detailed geotechnical investigation consisting of soil borings to determine foundation conditions.
- Prepare Preliminary Design Drawings.
- Prepare a preliminary construction cost estimate.
- Submit two sets of preliminary drawings to owner and State for review and comment. Attend a maximum of one meeting with Owners' Representative to review preliminary design.

FINAL DESIGN PHASE

- Develop sequence of construction including methods for water control, and erosion and sedimentation control.
- Prepare construction access plans to identify limits of disturbance to existing properties.
- Prepare final plans, sections and details for all work associated with the dam and spillway reconstruction.
- Prepare technical specifications.
- Prepare construction cost estimates. Identify method of payment to contractor (i.e. lump sum vs. unit price).
- Submit two sets of final drawings and technical specifications to owner and State for review and comment. Attend a maximum of one meeting with Owner's Representative to review final design.
- Incorporate any comments into contract documents and submit ten copies of the final contract drawings and technical specifications to owner for construction or bidding purposes.

PERMITTING PHASE

- Prepare all required permit applications to obtain State and local permits. Macchi Engineers will provide any follow up information as required to obtain permits. Local permitting may not be required; however, we will provide the local officials with the information provided to the State as a courtesy.
- Prepare Army Corps of Engineers permit application.
- Prepare an Operation and Maintenance Plan.
- Prepare an Emergency Operations Procedures as required by DEEP.

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	Lee's Pond Dam, Danbury, CT	BB	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Dam Inspection	Lake Forest Dam, Bridgeport, CT	C	William Barfield, Lake Forest Association	lakeforestassociation@gmail.com 203-372-7671
Dam Emergency Action Plan Preparation	Lake Phipps Dam, West Haven, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Dam Emergency Action Plan Preparation	Higganum Pond Dam, Haddam, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Dam Operations and Management Plan Preparation	Lake Forest Dam, Bridgeport, CT	C	William Barfield, Lake Forest Association	lakeforestassociation@gmail.com 203-372-7671
Dam Operations and Management Plan Preparation	Lake Phipps Dam, West Haven, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Dam Repair Plan Preparation	Crescent Lake Dam, Enfield, CT	B	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Dam Repair Plan Preparation	Ridgeview Pond Dam, Greenwich, CT	BB	Catarina Kavanagh, Cabinwood Association	caterinakavanagh@aol.com 203-550-6578
Underwater Investigation	Crescent Lake Dam, Enfield, CT	B	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Underwater Investigation	Northfield Pond Dam, Litchfield, CT	C	Arthur Christian, DEEP, IWRD	art.christian@ct.gov 860-424-3880
Dam Break Inundation Modeling and Mapping	Savin Lake Dam Repairs, Lebanon, CT	B	Daniel Biron, DEEP, IWRD	dan.biron@ct.gov 860-424-3892
Dam Break Inundation Modeling and Mapping	Lake Phipps Dam, West Haven, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Hydrologic and Hydraulic Studies	Lake Phipps Dam, West Haven, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Hydrologic and Hydraulic Studies	Northfield Pond Dam, Litchfield, CT	C	Arthur Christian, DEEP, IW	art.christian@ct.gov 860-424-3880
Stability Analysis	Higganum Pond Dam, Haddam, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Stability Analysis	Savin Lake Dam Repairs, Lebanon, CT	B	Daniel Biron, DEEP, IWRD	dan.biron@ct.gov 860-424-3892
Dam Repair and Construction Monitoring	Bunnell's Pond Dam, Bridgeport, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Dam Repair and Construction Monitoring	Crescent Lake Dam, Enfield, CT	B	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Other Specialized Dam Safety Related Services	Lake Phipps Channel Improve, West Haven, CT	C	Ted Rybak, DEEP, IWRD	thaddeus.rybak@ct.gov 860-424-3883
Other Specialized Dam Safety Related Services	Lake Forest Eel Passage, Bridgeport, CT	C	William Barfield, Lake Forest Association	lakeforestassociation@gmail.com 203-372-7671