

# LIBRARY PROJECTS

## SAMPLING

### ASHLAND TOWN LIBRARY - ASHLAND, MASSACHUSETTS

Performed a structural feasibility study for renovation and addition or a new library building. We were then hired to perform structural engineering services for the execution of the project consisting of renovations and additions to the existing library.

### AUBURN PUBLIC LIBRARY - AUBURN, MAINE

The expansion increased the square footage of the library building from 13,000 square feet to approximately 30,000 square feet. While the inside of the original building underwent extensive renovation, the expansion maintains the original façade of the Carnegie building and preserves original architectural features inside the building. The entire project was designed to complement and return the building to its gracious 1904 character while meeting the information needs of the community today and in the future.

### AYER PUBLIC LIBRARY - AYER, MASSACHUSETTS

Structural design for a 13,000 square foot addition to the town's historic library. This 1890's library, designed by Alexander Jenny, required heavy timber roof framing, steel-concrete composite framed floors and a conventional cast-in-place foundation to combine the old and new elements and to more than triple the size of the library.

### BRIDGEWATER PUBLIC LIBRARY - BRIDGEWATER, MASSACHUSETTS

Investigate existing water leakage at the library entrance, work with Client to produce repair recommendations, and sketch detail for bid.

### BROCKTON PUBLIC LIBRARY - BROCKTON, MASSACHUSETTS

Renovation and expansion of the town's existing main library which was originally constructed in 1912. The renovation and expansion was necessary to accommodate the needs of the town's residents and today's technology. A new composite steel framed structure was mated to the existing masonry, wood, and steel construction. The new structure was "inserted" into the demolished stack wing of the existing building. The two buildings were connected at this junction to provide lateral force resistance to the existing structure via load transfer to new steel ordinary moment frames.

### CANTON PUBLIC LIBRARY - CANTON, MASSACHUSETTS

Expansion of this historical library nearly doubled the size of the original structure, which was built in 1902. The primary structure of the addition of this building is steel framed with composite concrete on metal deck floor slabs and tube steel columns. The lateral system of the new addition is composed of moment frames. The foundation was constructed of cast-in-place spread footings. Extensive renovations and strengthening was done to the existing buildings structure per the requirements of the Massachusetts State Building Code, Chapter 34.

### FLINT PUBLIC LIBRARY - MIDDLETON, MASSACHUSETTS

Performed a structural feasibility study and provided a report on the structural condition of the existing building.



Ayer Public Library  
Ayer, Massachusetts

Rendering by Robert Berry



Brockton Public Library  
Brockton, Massachusetts



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### FRANKLIN PUBLIC LIBRARY - FRANKLIN, MASSACHUSETTS

Performed a structural feasibility study and provided a report on the structural condition of the existing building.

### LEVI HEYWOOD MEMORIAL LIBRARY - GARDNER, MASSACHUSETTS

This new two-story steel framed structure on a sloping site has basic floor framing of composite concrete slabs on composite steel beams and girders. The roof framing is the same, but is "capped" by lightgauge metal trusses over unoccupied space to create a gable roof and towers over each entrance. The lateral force resisting system is comprised of structural steel ordinary moment frames. Lateral load distribution was complicated by the additional horizontal loads from the full story-height retaining walls on two sides of the building.

### MATTAPOISETT PUBLIC LIBRARY - MATTAPOISETT, MASSACHUSETTS

A structural feasibility study was performed to evaluate the structural systems of the Library for the possible renovation and addition to the existing one-story structure with a partial mezzanine and a full basement, unreinforced brick bearing/shear walls, and wood framed floors and roof. The original building was constructed in approximately 1900. Bearing walls appear to be the exterior walls. Columns are present within the interior spaces.

### MIDDLESEX COMMUNITY COLLEGE, FEDERAL LIBRARY LOWELL, MASSACHUSETTS

Investigation of the existing building and 780 CMR, Chapter 34 Analysis and Report; Provided design for seismic and gravity load strengthening and renovations of existing structure as required for compliance with the Code; provided construction documents and construction administration services; and provided structural tests and inspections administration services during construction.

### SHREWSBURY PUBLIC LIBRARY - SHREWSBURY, MASSACHUSETTS

Performed a structural feasibility study for the possible renovation, demolition, and addition to the existing structure.

### THAYER MEMORIAL LIBRARY - LANCASTER, MASSACHUSETTS

Expansion of the existing library facility via new additions of approximately 11,300 square feet and reorganization of the existing library spaces. The space reorganization required demolition of an existing stack wing and structural retrofits to accommodate attachment of the new additions. The original historic library was repaired and restored throughout. The Civil War memorial was relocated to a more prominent location within the new library space. Composite steel framing provided the necessary flexibility in mating the new and old structure and integrating the new mechanical systems.

### UXBRIDGE FREE PUBLIC LIBRARY - UXBRIDGE, MASSACHUSETTS

Performed a structural feasibility study for the possible renovation and addition to the existing structure.

### WATERTOWN FREE PUBLIC LIBRARY - WATERTOWN, MASSACHUSETTS

Performed a structural feasibility study for the possible renovation, demolition, and addition to the existing structure.



Thayer Memorial Library  
Lancaster, Massachusetts

Photo by Edward Jacoby



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