

## Great Blue Hill Observation Tower

**Describe major significant architectural features of property. Include the overall shape of the building, its materials, craftsmanship, decorative details, interior space and features, as well as various aspects of its site and environment.**

The 35-foot tall Great Blue Hill Observation Tower, also known as Eliot Tower, stands to the northeast of the summit of Great Blue Hill in the Blue Hills Reservation (see photo 1). The tower and connected pavilion were built between 1937 and 1938 by the Civilian Conservation Corps (CCC) as part of a summit landscape dedicated in honor of landscape architect Charles Eliot. Its rubble stone walls combined with heavy timber construction and overhanging slate roofs is very characteristic of CCC and Works Progress Administration rustic “parkitecture” of the era, and the tower design is very similar to that of other contemporaneous local summit towers including Chickatawbut Observation Tower in Quincy and Wright’s Tower in Medford. The tower, pavilion, and pavilion terrace blend seamlessly into the exposed, undulating stony ledge of the summit through the use of native stone in the structure’s walls, retaining walls, and rough-cut steps.

The square, squat two-story stone tower features a pyramidal slate roof, slit window openings, and a narrow door opening on the east façade at the top of a stone stair with wrought iron railings. Wide openings at the top of the tower provide views to the surrounding landscape from the second-story observation level. The observation level is accessed via narrow, cut granite stairs that spiral up along the interior tower walls. Long distance views are limited to an arc from the northwest to the south due to tree growth behind the structure.

The tower is connected to a one-story pavilion that angles to the west and north with stone walls and piers, exposed timber rafters, and faux-slate roof sheathing. A large interior fireplace dominates the center of the pavilion with a granite stone hearth that contrasts with the slate flagstone flooring of the rest of the pavilion. The pavilion opens to the northeast to a terrace with an eroded dirt/gravel surface edged by a retaining wall and numerous sets of stairs that step down to the summit landscape below.



1. Great Blue Hill Observation Tower, north facade

## Access to Pavilion and Tower

**Explain why applying the General Requirements for Barrier Free Access would threaten or destroy the historic significance of the property.**

Architectural feature: Stone Stairs

Approximate date of feature: 1937-38

The Great Blue Hill Observation Tower includes seven sets of stairs from its original construction. The treads and risers of these stairs are either constructed of irregular stones held together by mortar, smooth stone blocks held together by mortar, or solid pieces of smooth stone. Please see the attached "Eliot Tower Complex Stairs: Photographs". Each set of stairs has been given a letter designation, outlined below.

- Stair A: Northwest stairs leading to pavilion terrace
- Stair B: North stairs leading to pavilion terrace
- Stair C: Stairs leading to the tower terrace
- Stair D: Tower entrance stairs, East side
- Stair E: Interior tower stairs
- Stair F: Northeast stairs between the tower terrace and the pavilion terrace
- Stair G: Rear pavilion stairs

These stairs have uneven treads and risers that are not of uniform depth or height. They also feature abrupt nosings and are not designed to prevent water from accumulating on the surface.

In order to bring the stairs into full compliance, they would need to be entirely removed and replaced with new staircases with uniform treads and risers that feature compliant nosings. The loss of the original stairs and replacement with new, modern stairs would significantly detract from the tower's architectural integrity and its historic rustic character.

Only two sets of stairs currently feature railings—the interior tower stairs and the tower entrance stairs on the East side (Stairs D and E). These wrought iron railings are original to the structure and do not comply with 521 CMR or the ADA. The five stairs to the pavilion and pavilion terrace currently do not have any handrails. Accessibility code requires two handrails (left-hand side and right-hand side) at each of the five locations. Life safety code also requires an intermediate railing at the primary stair to the terrace (Stair B).

The addition of this many handrails to the exterior stairs would detract from the simple, rustic architectural character of the pavilion and pavilion terrace. Installing the handrails would also irreversibly impact the historic granite walls and/or steps by drilling into them. Installation also has the risk of causing long-term damage to the granite via freeze-thaw cycles related to moisture inevitably infiltrating the bolt holes in the exposed summit climate.

The existing railing at the interior tower stairs (Stair E) features multiple posts embedded in the granite stair treads. Removing the existing railing and replacing it with a code-compliant railing risks causing splitting or cracking of the historic granite treads. A code-compliant railing that also includes a required railing along the interior wall of the tower would narrow by the several inches the travel path up and down the already narrow stairs that often has two-way traffic during busy visitation periods.

**Describe the proposed alternative Barrier Free Access solution under the Special Rule (4.1.793). Include photographs, drawings, and all pertinent information to assist us in our review.**

The proposed approach is to provide an accessible route to the interior of the tower pavilion from the intersection of the Red Dot Trail and the fire road spur that connects out to the paved Summit Road. An accessible route will be provided to the pavilion terrace by adding a new interior ramp in the west end of the pavilion, and by raising the level of the terrace and improving the surface through installation of new flagstone paver. This minimally invasive site improvement addresses existing barriers to access in a manner that is sensitive to the naturalistic and rustic setting of the Great Blue Observation Tower.

The only access to the tower site is pedestrian in nature, via the Summit Road or the Red Dot Trail (see attached Blue Hills Reservation Trail Map). The Summit Road is a  $\frac{3}{4}$  mile single-lane road with steep slopes of up to 17%. The road is open for hikers and cyclists, but is not open to vehicular traffic except for DCR staff, Blue Hill Observatory staff, and groups upon prior request. The road is heavily used by cyclists and hikers, especially during warmer months. The Red Dot Trail is a challenging 1.5 mile hike on rugged, rocky, and hilly terrain that starts at the Trailside Museum at the base of Great Blue Hill. No public parking is provided at the summit. The nearest public parking is provided in the parking lots at the Mass Audubon Trailside Museum,  $\frac{3}{4}$  of a mile away.

In addition, the damaged historic railings at the east tower stair (Stair D) will be replaced with compliant railings that are in keeping with the style of the original railings. At the Observation Level, the interior railing above the stairwell opening will be replaced with a new railing that meets modern codes.

See attached drawings for details.

## Tower Observation Level Access

**Explain why applying the General Requirements for Barrier Free Access would threaten or destroy the historic significance of the property.**

Architectural feature: Tower and Observation Level

Approximate date of feature: 1937-38

One of the primary features of the Great Blue Hill Observation Tower is the Observation Level with wide openings on all four sides providing panoramic views of the summit area and surrounding landscape of metropolitan Boston and the Boston Harbor Islands. Located one story above the pavilion level, the Observation Level is accessible only via the original set of stone stairs that step up along the inside walls to a small observation platform. (See "Eliot Tower Complex Stairs: Photographs".)

Providing physical access to the Observation Level via an interior lift or elevator is technically infeasible given the physical restraints of the structure. Construction of an exterior lift or elevator cannot be accomplished without introducing a major structure that would be incompatible with the architectural integrity and setting of the tower.

In addition, the existing openings at the Observation Level are located 45" off of the floor (see photo 2). The height of these openings restricts the view of chair users. To open up the view for chair users in accordance with the Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG), the tower would need to be altered to provide an unrestricted viewing opportunity that accommodates eye levels at a minimum of 32" above the ground or floor. (FSORAG 3.4.3). Enlarging the openings to lower their sill heights to 32" would create a significant change to the tower's original design that would have an adverse effect on its architectural integrity. An opening at 32" would require a railing at a height of at least 36", further altering the historic design.

**Describe the proposed alternative Barrier Free Access solution under the Special Rule (4.1.793). Include photographs, drawings, and all pertinent information to assist us in our review.**

Programmatic access to the views provided from the Observation Level will be provided in the form of two interpretive panels that will be installed on the north terrace. The panels will show the views to the East and to the North on a clear day. A view study has identified landmarks that will be indicated on the panels. The panel showing the north view will be installed on the north side of the north terrace, and the panel showing the East view will be installed on the east side.

The panels will also include a QR code that will link to an interpretive video about the tower. This video is currently being developed with the assistance of Blue Hills Reservation interpretive staff. The video will be similar in style to other interpretive videos that our staff have recently produced (see <https://www.youtube.com/watch?v=8709cxx0uWE>). This interpretive information will also be made available on DCR's website, so that visitors who are unable to hike to the Tower can learn about the site and see the views offered from the top of the Tower.



2. View of observation level from the top of the staircase, showing two of the viewing windows. Left is the West view, right is the North view. The existing railing shown will be replaced with a compliant safety railing.



3. Sample view panel to be installed on pavilion terrace (still in draft form).

## Pavilion Fireplace Hearth

**Explain why applying the General Requirements for Barrier Free Access would threaten or destroy the historic significance of the property.**

Architectural feature: Pavilion Fireplace Hearth

Approximate date of feature: 1937-38

Describe existing condition:

The floor of the pavilion consists mostly of smooth flagstone, but there is a section of floor in front of the fireplace that is constructed of rough rubble stone, held together with mortar (see photo 4). Changes in level in this section of flooring are typically  $\frac{3}{4}$ ", but can reach up to 2" in depth in limited locations.

Bringing the hearth area up to standards for an accessible route through this area would require replacement of the rough stones with an alternative material due to the uneven nature of the existing stones. This would require the removal of this original, distinctive feature of the pavilion that visually emphasizes the interior architectural focal point of the fireplace.

**Describe the proposed alternative Barrier Free Access solution under the Special Rule (4.1.793). Include photographs, drawings, and all pertinent information to assist us in our review.**

To make this section of flooring less of a barrier to access, DCR proposes to repoint the existing stones to minimize their vertical reveal. Where the stones create changes in level beyond  $\frac{3}{4}$ ", those stones will be replaced with flatter stones that match the type, color, and finish of the original stones.

DCR will also resurface the pavilion terrace with new bluestone pavers to improve access to this area for persons with disabilities.



4. Interior view of pavilion showing uneven stones at fireplace hearth and surrounding flagstone flooring.



5. Existing conditions at pavilion terrace.