**EXTERIOR CHRONOLOGY**

**1833-1954**

<table>
<thead>
<tr>
<th>Event</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron and copper crown and gilded weathervane</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Vertical wood board cladding at spire</td>
<td>1833</td>
</tr>
<tr>
<td>Octagonal pinnacles with scroll-cut ridge boards</td>
<td>1833</td>
</tr>
<tr>
<td>Crenelated balustrade (raised above roof drip edge)</td>
<td></td>
</tr>
<tr>
<td>Low slope roof eave drip with holding profile underneath of roof</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Octagonal corner pylons (built out from structural timber frame)</td>
<td></td>
</tr>
<tr>
<td>Vertical flush-board siding with intermittent water table at corner</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Horizontal flush-board siding at tower main body</td>
<td></td>
</tr>
<tr>
<td>Belfry openings with open diamond lattice faced with vertical wooden</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Gothic-arched tracery</td>
<td></td>
</tr>
<tr>
<td>Quadrofoil panels at base of belfry tracery</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Half-round double water table</td>
<td></td>
</tr>
<tr>
<td>Trimmed clock face with black surfacing (presumably schmaltz and gilded clock numerals and hands)</td>
<td></td>
</tr>
<tr>
<td>Tall lancet window with diamond pattern glazing</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Square pinnacles with scroll-cut ridge boards rising from roof eave as</td>
<td>c. 1833</td>
</tr>
<tr>
<td>vertical extensions of corner buttresses crenelated balustrade between</td>
<td></td>
</tr>
<tr>
<td>Rake balustrade with open scroll-cut tracery between top and bottom</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Parge stepped buttresses at eave of four corners of church terminatin</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Square cross-gabled one-story pylon supporting octagonal corner pylons</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Color: Painted wood in apparent earthen tone color at all surfaces, including spire</td>
<td>c. 1833</td>
</tr>
</tbody>
</table>

**1956-2019**

<table>
<thead>
<tr>
<th>Event</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron and copper crown and gilded weathervane</td>
<td></td>
</tr>
<tr>
<td>Flat folded seamed lead-coated copper cladding at spire</td>
<td>c. 1949</td>
</tr>
<tr>
<td>Tower pinnacles removed c. 1949</td>
<td></td>
</tr>
<tr>
<td>Crenelated balustrade removed c. 1949</td>
<td></td>
</tr>
<tr>
<td>Over-framed steep-sloped flat seam copper roof c. 1955</td>
<td></td>
</tr>
<tr>
<td>Projecting octagonal corner pylons removed c. 1955</td>
<td></td>
</tr>
<tr>
<td>Vertical siding across full face of tower, with flat wood trim detail</td>
<td>c. 1955</td>
</tr>
<tr>
<td>Belfry opening tracery and latticework backed up with horizontal metal louvred panels</td>
<td>c. 1955</td>
</tr>
<tr>
<td>Quadrofoil panels replaced with flat plywood panels (except remaining at rear west face)</td>
<td>c. 1955</td>
</tr>
<tr>
<td>Flat wood trim at former double water table band c. 1955</td>
<td></td>
</tr>
<tr>
<td>Trimmed clock face with black-red surfacing and gilded clock numerals and hands</td>
<td>c. 1833</td>
</tr>
<tr>
<td>Tall lancet window with diagonal pattern glazing</td>
<td></td>
</tr>
<tr>
<td>Square pinnacles and balustrade removed at west eaves c. 1956</td>
<td></td>
</tr>
<tr>
<td>Then at east eaves, roof slatted over c. 1952 (?)</td>
<td></td>
</tr>
<tr>
<td>Rake balustrade removed c. 1956 (?)</td>
<td></td>
</tr>
<tr>
<td>Parge stepped buttresses at eave of four corners of church remaining at roof eave gutter</td>
<td>c. 1956</td>
</tr>
<tr>
<td>Square cross-gabled one-story pylon remaining with metal gable rofts and octagonal pylons</td>
<td>c. 1949</td>
</tr>
<tr>
<td>Color: Spire and steep-sloped roof in dark weathered lead-coated copper, wood in limestone colored paint</td>
<td>c. 1956</td>
</tr>
</tbody>
</table>

---

**FIRST PARISH IN CAMBRIDGE**

**MASSACHUSETTS AVENUE WALL AND TOWER PROJECT**

**ISAIAS ROGERS, ARCHITECT**

**ARTHUR H. BROOKS, ARCHITECT**

**TORREY ARCHITECTURE**

**DRAWN BY**

**CHECKED BY**

**LIGHTING CONSULTANT**

**LANDSCAPE ARCHITECT**

**COST CONSULTANT**

**NO. 98 NORTH WASHINGTON STREET, SUITE 109**

**BOSTON, MA 02116**

**WSP USA**

**WALTHAM, MA 02451**

**AMERICAN STEEPLE & TOWER**

**SALEM, MA 01970**

**60 WASHINGTON STREET, SUITE 401**

**BOSTON, MA 02116**

**WWW.TORREYARCHITECTURE.COM**
FIRST PARISH IN CAMBRIDGE
MASSACHUSETTS AVENUE
WALL AND TOWER PROJECT
ENTRY ELEVATION VIEW
OPEN NARTHEX AIRLOCK LOBBY
WITH INDIRECT LIGHTING OF CEILING
VAULTS AND VIEWS THROUGH GLASS
DOORS AND ENLARGED WINDOWS
TO SURROUNDING ENVIRONMENT
WIDENED NARTHEX WINDOWS
WITH VIEWS TO SOUTH TERRACE
AND HARVARD SQUARE
STEPPED ROUTE TO ENTRY DOOR
LANDING FROM CHURCH STREET
SIDEWALK
BENCHES AT ACCESSIBLE SOUTH
ACTIVITY TERRACE FACING
HARVARD SQUARE
"RIEPANDENS YEW", IVY AND BULBS
AT EXPANDED PLANTING BED AT
TREE WELL
DASHED ARROWS INDICATE 1-IN-20
GRADUALLY SLOPED WALKWAYS
MEETING ADA AND MAAB
REGULATIONS FOR ACCESSIBLE
ROUTES
ACCESSIBLE GLASS DOORS AND
SIDELIGHTS
WIDENED NARTHEX WINDOWS
WITH VIEWS TO NORTH TERRACE
AND BURIAL GROUND
PLANTING BEDS BETWEEN PAVED
ROUTES AND CHURCH
CHALICE FOUNTAIN AND
MEDITATION CIRCLE AT RAISED
ACCESSIBLE NORTH TERRACE
FACING BURIAL GROUND
SOLID ARROWS INDICATE 1-IN-12
SLOPED CONCRETE RAMPS
MEETING ADA AND MAAB
REGULATIONS FOR ACCESSIBLE
ROUTES
ACCESSIBLE ROUTE TO ENTRY
DOOR LANDING FROM MASS AVE
SIDEWALK
CITY OF CAMBRIDGE
BURIAL GROUND
AUTO-OPERATOR AT EXISTING
DOORS
RAMPED ACCESSIBLE ROUTE TO
SANCTUARY
GRANITE STEPS AND IRONWORK
HANDRAILS
MASSACHUSETTS AVENUE SIDEWALK
CHURCH STREET
"RIEPANDENS YEW", IVY AND BULBS
AT TERRACED "GREEN PEDESTAL"
PLANTING BEDS
GLASS TRANSOM WINDOW AND
FRAME OVER DOORS
GLASS AND ALUMINUM ENTRANCE
DOORS WITH BALANCED DOOR
HARDWARE. ETCHED GLASS WITH
RED PAINTED TRIMMED ALUMINUM
IN PATTERN OF ORIGINAL DOOR
DESIGN.
SOUTH TERRACE AT CHURCH
STREET AND STEPPED PATHWAY TO
ENTRY PLATFORM
COMMUNICATIONS BOARD (CABINET
WITH GLASS DOOR FRAME,
INTERNALLY LIT)
GRANITE RETAINING WALLS
LETTERING CARVED INTO GRANITE
SEATING WALL
ACCESSIBLE ENTRY LANDING
ACROSS ENTIRE ENTRY FACADE
IRONWORK HANDRAILS WITH
MINIMAL PROFILE, HORIZONTAL AT
ENTRY LANDING
NORTH TERRACE AT BURIAL
GROUND AND RAMPED PATHWAY
TO ENTRY PLATFORM
SLOPED RAILINGS AT RAMPS
BEHIND
CHALICE FOUNTAIN
RAMP ALONG BURIAL GROUND
FENCE, SEPARATED BY GRANITE
CURB
"GREEN PEDESTAL" PLANTING BED
RESTORED ORIGINAL WOODWORK
RESTORED AS BASE FOR
REPLICATED ORIGINAL PYLONS AT
TOWER CORNERS
REPLICATED ORIGINAL CRENELLATED
BATTLEMENT TRIM
GRANITE STEPS
SOUTH TERRACE AT CHURCH
STREET SIDEWALK
ACCESSIBLE ENTRY LANDING
PLANTING BED AT TREE WELL
TERRACED PLANTING BEDS
BIRD'S EYE VIEW AT ACCESSIBLE ENTRY
**FIRST PARISH IN CAMBRIDGE**
**MASSACHUSETTS AVENUE WALL AND TOWER PROJECT**

**PLAN VIEW**

- Open narthex airlock lobby with vaults, glass doors, side walls, and glass transom windows.
- Enlarged sidewalks and expanded planting beds.
- Stepped routes to entry door landing from church street sidewalk.
- Benches at accessible south activity terrace facing Harvard square.
- "Riepandens Yew" ivy and bulbs at expanded planting bed at tree well.
- Dashed arrows indicate 1-in-20 gradually sloped walkways.
- Solid arrows indicate 1-in-12 sloped concrete ramps. Meeting ADA and MAAB regulations for accessible routes.
- Granite steps and ironwork handrails.
- Open narthex airlock lobby with vaults and views through glass doors and enlarged windows to surrounding environment.
- Chalice fountain and meditation circle at raised terrace facing burial ground.
- Accessible route to entry door landing from Mass Ave sidewalk.
- Ramp to accessible route to entry platform.
- Replicated original pylons at corner pylons.
- Restored original woodwork.
- Restoration of original crenellated granite steps.
- Sanctorium across entire entry facade.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium across entire entry facade.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium across entire entry facade.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium across entire entry facade.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium across entire entry facade.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium across entire entry facade.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium across entire entry facade.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
- Granite retaining walls.
- Sanctorium across entire entry facade.
- Accessible entry landing.
- Planting beds at tree well.
- South terrace at church.
- South terrace at church.
- Restored lancet window.
- Widened narthex windows.
- Auto-operator at existing doors.
- Accessible glass doors and sidelite and glass and aluminum entrance.
- McArist and Harvard square.
- Street sidewalk.
- Tree well.
- Side walk.
ENTRY VIEW FROM SOUTHEAST

(HIDDEN IN THIS VIEW) WIDENED NARTHEX WINDOWS WITH VIEWS TO SOUTH TERRACE AND HARVARD SQUARE

STEPPED ROUTE TO ENTRY DOOR LANDING FROM CHURCH STREET SIDEWALK

BENCHES AT ACCESSIBLE SOUTH ACTIVITY TERRACE FACING HARVARD SQUARE

COMMUNICATIONS BOARD (CABINET WITH GLASS DOOR FRAME, INTERNALLY LIT)

GRANITE RETAINING WALLS AT PLANTING BEDS PROVIDE SEATING FOR PEDESTRIANS

ACCESSIBLE ENTRY LANDING ACROSS ENTIRE ENTRY FACADE

ENTRY VIEW FROM NORTHEAST

RESTORED LANCET WINDOW WITH INTERNAL LIGHTING

RESTORED ORIGINAL PYLON BASES, RECONSTRUCTED CRENELLATED BALUSTRADE AND OCTAGONAL CORNER PYLONS AT TOWER

ACCESS RAMPS ALONG WALL OF CHURCH AND TOWER

CHALICE FOUNTAIN AND MEDITATION CIRCLE AT RAISED NORTH TERRACE

RAMPED SIDEWALK ALONG BURIAL GROUND FENCE LINE AT NORTH EDGE OF CHURCH PROPERTY

GRANITE STEPS RAISED TO NORTH TERRACE

“GREEN PEDESTAL” PLANTING BED

GRANITE STEPS WITH IRONWORK HANDRAILS

FIRST PARISH IN CAMBRIDGE
MASSACHUSETTS AVENUE
WALL AND TOWER PROJECT

TORREY ARCHITECTURE
**FIRST PARISH IN CAMBRIDGE**

**MASSACHUSETTS AVENUE**

**WALL AND TOWER PROJECT**

**ENTRY ELEVATION VIEW**

OPEN NARTHEX AIRLOCK LOBBY WITH INDIRECT LIGHTING OF CEILING VAULTS AND VIEWS THROUGH GLASS DOORS AND ENLARGED WINDOWS TO SURROUNDING ENVIRONMENT.

WIDENED NARTHEX WINDOWS WITH VIEWS TO SOUTH TERRACE AND HARVARD SQUARE.

STEPPED ROUTE TO ENTRY DOOR LANDING FROM CHURCH STREET SIDEWALK.

BENCHES AT ACCESSIBLE SOUTH ACTIVITY TERRACE FACING HARVARD SQUARE.

"RIEPANDENS YEW", IVY AND BULBS AT EXPANDED PLANTING BED AT TREE WELL.

DASHED ARROWS INDICATE 1-IN-20 GRADUALLY SLOPED WALKWAYS MEETING ADA AND MAAB REGULATIONS FOR ACCESSIBLE ROUTES.

ACCESSIBLE GLASS DOORS AND SIDELIGHTS WIDENED NARTHEX WINDOWS WITH VIEWS TO NORTH TERRACE AND BURIAL GROUND.

PLANTING BEDS BETWEEN PAVED ROUTES AND CHURCH CHALICE FOUNTAIN AND MEDITATION CIRCLE AT RAISED ACCESSIBLE NORTH TERRACE FACING BURIAL GROUND.

SOLID ARROWS INDICATE 1-IN-12 SLOPED CONCRETE RAMPS MEETING ADA AND MAAB REGULATIONS FOR ACCESSIBLE ROUTES.

ACCESSIBLE ROUTE TO ENTRY DOOR LANDING FROM MASS AVE SIDEWALK.

**TOWER ENTRY AND NARTHEX LOBBY**

**FIRST PARISH IN CAMBRIDGE**

**MASSACHUSETTS AVENUE**

**WALL AND TOWER PROJECT**

**ENTRY DOOR**

**GENERAL DRAWING NOTES:**

1. **Materials:**
   a. Extruded aluminum alloy 6063-T6 with a minimum wall thickness of 1/8”
   b. Finishes:
      a. Available in oxidized, textured painted and powder coat paint finishes
      b. Available in standard door thickness is 2”
      c. Available side widths: 3-1/2”, 3-3/4”, 4-1/2”, and 6-3/4”
      d. Available bottom rail heights: 3/8” and 3/4” (or greater using dress plates 3/8” recommended to comply with 2000 ADA guidelines).
   c. Center rail minimum is 1-1/2” (per detail 8 on page 6).
   d. Interior side glass steps snap on to accommodate most glass thickness (special glass sizes can be accommodated, see page 12 or consult factory).
FIRST PARISH IN CAMBRIDGE
MASSACHUSETTS AVENUE
WALL AND TOWER PROJECT
ENTRY ELEVATION VIEW
OPEN NARTHEX AIRLOCK LOBBY WITH INDIRECT LIGHTING OF CEILING VAULTS AND VIEWS THROUGH GLASS DOORS AND ENLARGED WINDOWS TO SURROUNDING ENVIRONMENT WIDENED NARTHEX WINDOWS WITH VIEWS TO SOUTH TERRACE AND HARVARD SQUARE STEPPED ROUTE TO ENTRY DOOR LANDING FROM CHURCH STREET SIDEWALK BENCHES AT ACCESSIBLE SOUTH ACTIVITY TERRACE FACING HARVARD SQUARE "RIEPANDENS YEW", IVY AND BULBS AT EXPANDED PLANTING BED AT TREE WELL DASHED ARROWS INDICATE 1-IN-20 GRADUALLY SLOPED WALKWAYS MEETING ADA AND MAAB REGULATIONS FOR ACCESSIBLE ROUTES ACCESSIBLE GLASS DOORS AND SIDELIGHTS WIDENED NARTHEX WINDOWS WITH VIEWS TO NORTH TERRACE AND BURIAL GROUND PLANTING BEDS BETWEEN PAVED ROUTES AND CHURCH CHALICE FOUNTAIN AND MEDITATION CIRCLE AT RAISED ACCESSIBLE NORTH TERRACE FACING BURIAL GROUND SOLID ARROWS INDICATE 1-IN-12 SLOPED CONCRETE RAMPS MEETING ADA AND MAAB REGULATIONS FOR ACCESSIBLE ROUTES ACCESSIBLE ROUTE TO ENTRY DOOR LANDING FROM MASS AVE SIDEWALK CITY OF CAMBRIDGE BURIAL GROUND AUTO-OPERATOR AT EXISTING DOORS RAMPED ACCESSIBLE ROUTE TO SANCTUARY GRANITE STEPS AND IRONWORK HANDRAILS MASSACHUSETTS AVENUE SIDEWALK CHURCH STREET "RIEPANDENS YEW", IVY AND BULBS AT TERRACED "GREEN PEDESTAL" PLANTING BEDS GLASS TRANSOM WINDOW AND FRAME OVER DOORS GLASS AND ALUMINUM ENTRANCE DOORS WITH BALANCED DOOR HARDWARE. ETCHED GLASS WITH RED PAINTED TRIMMED ALUMINUM IN PATTERN OF ORIGINAL DOOR DESIGN. SOUTH TERRACE AT CHURCH STREET AND STEPPED PATHWAY TO ENTRY PLATFORM COMMUNICATIONS BOARD (CABINET WITH GLASS DOOR FRAME, INTERNALLY LIT) GRANITE RETAINING WALLS LETTERING CARVED INTO GRANITE SEATING WALL ACCESSIBLE ENTRY LANDING ACROSS ENTIRE ENTRY FACADE IRONWORK HANDRAILS WITH MINIMAL PROFILE, HORIZONTAL AT ENTRY LANDING NORTH TERRACE AT BURIAL GROUND AND RAMPED PATHWAY TO ENTRY PLATFORM SLOPED RAILINGS AT RAMPS BEHIND CHALICE FOUNTAIN RAMP ALONG BURIAL GROUND FENCE, SEPARATED BY GRANITE CURB "GREEN PEDESTAL" PLANTING BED RESTORED ORIGINAL WOODWORK RESTORED AS BASE FOR REPLICATED ORIGINAL PYLONS AT TOWER CORNERS REPLICATED ORIGINAL CRENELLATED BATTLEMENT TRIM GRANITE STEPS RESTORED LANCET WINDOW SOUTH TERRACE AT CHURCH STREET SIDEWALK ACCESSIBLE ENTRY LANDING PLANTING BED AT TREE WELL TERRACED PLANTING BEDS BIRD'S EYE VIEW AT ACCESSIBLE ENTRY
FIRST PARISH IN CAMBRIDGE
MASSACHUSETTS AVENUE
WALL AND TOWER PROJECT
ENTRY ELEVATION VIEW
OPEN NARTHEX AIRLOCK LOBBY WITH INDIRECT LIGHTING OF CEILING VAULTS AND VIEWS THROUGH GLASS DOORS AND ENLARGED WINDOWS TO SURROUNDING ENVIRONMENT WIDENED NARTHEX WINDOWS WITH VIEWS TO SOUTH TERRACE AND HARVARD SQUARE STEPPED ROUTE TO ENTRY DOOR LANDING FROM CHURCH STREET SIDEWALK BENCHES AT ACCESSIBLE SOUTH ACTIVITY TERRACE FACING HARVARD SQUARE "RIEPANDENS YEW", IVY AND BULBS AT EXPANDED PLANTING BED AT TREE WELL DASHED ARROWS INDICATE 1-IN-20 GRADUALLY SLOPED WALKWAYS MEETING ADA AND MAAB REGULATIONS FOR ACCESSIBLE ROUTES ACCESSIBLE GLASS DOORS AND SIDELIGHTS WIDENED NARTHEX WINDOWS WITH VIEWS TO NORTH TERRACE AND BURIAL GROUND PLANTING BEDS BETWEEN PAVED ROUTES AND CHURCH CHALICE FOUNTAIN AND MEDITATION CIRCLE AT RAISED ACCESSIBLE NORTH TERRACE FACING BURIAL GROUND SOLID ARROWS INDICATE 1-IN-12 SLOPED CONCRETE RAMPS MEETING ADA AND MAAB REGULATIONS FOR ACCESSIBLE ROUTES ACCESSIBLE ROUTE TO ENTRY DOOR LANDING FROM MASS AVE SIDEWALK CITY OF CAMBRIDGE BURIAL GROUND AUTO-OPERATOR AT EXISTING DOORS RAMPED ACCESSIBLE ROUTE TO SANCTUARY GRANITE STEPS AND IRONWORK HANDRAILS MASSACHUSETTS AVENUE SIDEWALK CHURCH STREET "RIEPANDENS YEW", IVY AND BULBS AT TERRACED "GREEN PEDESTAL" PLANTING BEDS GLASS TRANSOM WINDOW AND FRAME OVER DOORS GLASS AND ALUMINUM ENTRANCE DOORS WITH BALANCED DOOR HARDWARE. ETCHED GLASS WITH RED PAINTED TRIMMED ALUMINUM IN PATTERN OF ORIGINAL DOOR DESIGN. SOUTH TERRACE AT CHURCH STREET AND STEPPED PATHWAY TO ENTRY PLATFORM COMMUNICATIONS BOARD (CABINET WITH GLASS DOOR FRAME, INTERNALLY LIT) GRANITE RETAINING WALLS LETTERING CARVED INTO GRANITE SEATING WALL ACCESSIBLE ENTRY LANDING ACROSS ENTIRE ENTRY FACADE IRONWORK HANDRAILS WITH MINIMAL PROFILE, HORIZONTAL AT ENTRY LANDING NORTH TERRACE AT BURIAL GROUND AND RAMPED PATHWAY TO ENTRY PLATFORM SLOPED RAILINGS AT RAMPS BEHIND CHALICE FOUNTAIN RAMP ALONG BURIAL GROUND FENCE, SEPARATED BY GRANITE CURB "GREEN PEDESTAL" PLANTING BED RESTORED ORIGINAL WOODWORK RESTORED AS BASE FOR REPLICATED ORIGINAL PYLONS AT TOWER CORNERS REPLICATED ORIGINAL CRENELLATED BATTLEMENT TRIM GRANITE STEPS RESTORED LANCET WINDOW SOUTH TERRACE AT CHURCH STREET SIDEWALK ACCESSIBLE ENTRY LANDING PLANTING BED AT TREE WELL TERRACED PLANTING BEDS BIRD'S EYE VIEW AT ACCESSIBLE ENTRY
**KEYNOTES to ESTIMATE DRAWINGS**

**Project:**
Mass Ave Wall and Tower Project
First Parish Church Unitarian Universalist
3 Church Street, Cambridge, MA 02138

---

**WORK CATEGORIES SUMMARY**

Cost Estimate by Clive Tysoe of Ellana Inc. Construction Consultants, with cost input as noted:

**SL** SITE IMPROVEMENTS AND LANDSCAPING
Plaights cost input by Weimayr Jay Landscape Architecture

**FW** FOUNDATIONS AND WALLS

**RF** ROOFING AND FLASHING
Cost input by American Steeple and Tower, Inc., Yankee Steeplejack Company, Inc.

**SF** STRUCTURAL AND FRAMING

**TS** TRIM AND SIDING (WOOD) Cost input by American Steeple and Tower, Inc.

**GF** GLASS FIBER REINFORCED POLYMER (GFRP) RESTORATION ASSEMBLIES
Fabrication cost input by DuroFiber Inc., Architectural fiberglass Inc.

**DW** DOORS AND WINDOWS

**IF** INTERIORS AND FINISHES

**EM** ELECTRICAL AND MECHANICAL
Lighting cost input by Jeffrey Berg of WSP

**GS** GENERAL CONDITIONS/SITE PROTECTION
Selected cost input by American Steeple and Tower, Inc., Yankee Steeplejack Company, Inc.

---

**SL-4** Granite slab pavers at entry landing. Flames finish 24” x 36” x 2” paving stones set on concrete slab on backfilled grade.

**SL-5** Granite Steps at south terrace walkways. Set on retaining walls and concrete slab on backfilled grade.

**SL-6** Granite Benches, Fountain

**SL-7** Ironwork walkway guardrails, step handrails and double handrails at 1:12 ramps. Painted galvanized malleable steel solid posts grouted into paving and granite base walls, mid-rail, brackets and handrails using Julius Blum profile #4429.

**SL-8** Brick terrace paving within Work Area. Set on concrete substrate on compacted subgrade.

**SL-9** Concrete ramps and landings. Broom finish tinted concrete slab on compacted subgrade.

**SL-10** Plantings at plant beds. See drawing L-1 attached. Plantings cost input by Weimayr Jay Landscape Architecture

**SL-11** Notice board. Custom fabricated exterior glass-faced bulletin board cabinet on galvanized painted steel frame, internally lit.

**SL-12** Gate to burial ground. Ironwork replacement painted galvanized gate.

**SL-13** Restore City of Cambridge burial ground cast iron fence segment along north property line. Protect against damage during construction.

**SL-14** Site drainage. On-site drywell to collect surface drainage from two cast iron trench drains and from FW-6 foundation drain piping.

**SL-15** Irrigation System. Concealed automatic drip line system within plant beds to maintain SL-10.

**SL-16** Tree pruning of south terrace elm, coordinate with City of Cambridge arborist

**FW-5** Granite facing stone at tower pylon bases. Honed granite 2” thick on new cementitious board substrate.

**FW-6** Foundation drainage pipe set in crushed stone bed at bottom of waterproofing membrane. Run drain pipe to on-site drain manhole drywell. See Site Work SL-14.

**RF** ROOFING AND FLASHING

**RF-1** Foundation waterproofing within site Work Area. At existing concrete (c.1955) cast-in-place concrete foundation walls, apply membrane to excavation extents for site work (4 ft below grade, min).

**RF-2** Foundation insulation. At FW-1 locations, apply 2” extruded polyisocynate rigid insulation.

**RF-3** Stucco at exposed foundations. Wire lath and concrete stucco to 6” min. below finished grade over existing exposed concrete foundations at buttresses over FW-2 rigid insulation at foundation walls.

**RF-4** Insulate existing walls at Work Area exterior walls from foundation to top of attic floor level (top of cave gutter). Install blown-in dense cellulose insulation within wall cavities via round 2” dia holes cut in exterior siding. For filling of siding holes by others see TS-3.

**RF-5** Re-roof Spire. Following RF-1 at original spire roof, replace deteriorated sheathing boards (provide allowance for an assumed % replacement and unit cost), install asphalt roofing paper and install 20oz red copper flat seam roof at slopes and over ribs. Paint red copper roof surfaces in color to match GFRP. See GF-12 (ALT to RF-6).

**RF-6** Tower Roof. Following SF-1 removal of c.1954 overlay roof, install new plywood roof sheathing at low-slope (original) roof pitch, self-adhering bituthene waterproofing underlayment from edge of tower, around new GF-1 pinnacles and to base of RF-6 spire roof. Install snow guards at 12” O.C. Install 20oz red copper flat seam roof. Coordinate drip edge overlap of GF-3 Tower Roof Edge Friaze Board Trim.

**RF-7** Tower Roof. Following SF-1 removal of c.1954 overlay roof, install new plywood roof sheathing at low-slope (original) roof pitch, self-adhering bituthene waterproofing underlayment from edge of tower, around new GF-1 pinnacles and to base of RF-6 spire roof. Install snow guards at 12” O.C. Install 20oz red copper flat seam roof. Coordinate drip edge overlap of GF-3 Tower Roof Edge Friaze Board Trim.

**RF-8** Flashing at existing slate roof to tower walls. Replace broken slates to match, install self-adhering bituthene waterproofing underlayment from edge of tower, install 20oz red copper.
Roof Parapets Armature. Strip existing wood, replace deteriorated wood, prime and paint. Repair lead flashing (if any, or install new) at weather-exposed upper openings for remaining three elevations. Repair lead flashing (if any, or install new) at weather-exposed upper surfaces of tracery cut-outs and at rounded head casing trim, prime and paint. See GF-18 (ALT to TS-9)

TS-10

Restore East Elevation Lancer Windows Trajectory. (Two locations: north and south stairs) At (original 1833) deteriorated wood and glass, scrape loose paint, apply black smalt coating to clock face. Repair and install wood lintel, install new muntins and clock hands. Repair slate to original thickness. See GF-19 (ALT to TS-10)

GF

GLASS FIBER REINFORCED POLYMER (GFRP) RESTORATION ASSEMBLIES

Fabrication cost input by DuroFiber Inc, Architectural Fiberglass Inc. Installation cost input by American Steeple and Tower, Inc., Yankee Steeplejacket Company, Inc. Provide GFRP molded profile panels and semi-prefabricated assemblies for field attachment to galvanized steel framework, install new assemblies, install new wood or stucco cladding assemblies, scrape loose old paint, replace deteriorated wood, prime and paint. Repair lead flashing (if any, or install new) at weather-exposed upper surfaces of tracery cut-outs and at rounded head casing trim, prime and paint. Coordinate with WW-4 and DW-5 window restoration. See GF-19 (ALT to TS-10)

TS

TRIM AND SIDING (WOOD)

Coincides by American Steeple and Tower, Inc., Yankee Steeplejacket Company, Inc. Typical: Paint surfaces in color to match GFRP.

TS-1

Remove Vertical Tower Trim. At tower corners, remove (c.1954) vertical trim boards as required for new GFRP armature and cladding.

TS-2

Peep Tower Corners. At (c.1954) vertical flush wood siding at tower corners to be concealed by new GFRP assemblies, scrape loose paint, replace deteriorated wood, install ice and water shield membrane to accept SF-6 and SF-7 Tower Pilasters and Pilnattes Armatures.

TS-3

Restore Siding. At (c.1954) vertical flush wood siding to remain exposed: scrape loose paint, replace deteriorated wood, plug siding holes from wall insulation by others under FW-4 with wood plugs and epoxy resin filler for painting, prime and paint. See GF-14 (ALT to TS-3)

TS-4

Restore Buttresses. At existing wood buttresses (4 locations within Work Area), scrape loose paint, replace deteriorated wood, prime and paint. Match north side 2014 restoration work. See GF-15 (ALT to TS-4)

TS-5

Water table. Malogany water table trim at copper cap at bottom of wood siding, to cover FW-2/FW-3 insulation/stucco. See GF-16 (ALT to TS-5)

TS-6

Restore Tower Lancer Window Trajectory. At (original 1833) decorative screen and surface woodwork: scrape loose paint, replace deteriorated wood using malogany dutchnen and epoxy resin filler, prime and paint. Repair lead flashing at top surfaces of rounded head casing trim, prime and paint. See GF-17 (ALT to TS-6)

TS-7

Restore Clock Face. Remove clock hands and remove face access assembly, off site for restoration or replacement. Scrappe loose paint, replace deteriorated wood, prime and apply black smalt coating to clock face. Repair and install wood lintel, install new muntins and clock hands. Repair slate to original thickness. See GF-19 (ALT to TS-10)

TS-8

Remove Entry Trim and Siding. At original (1833) flush board siding and decorative trinkwork at pilaster base walls and gables, scrape loose paint, apply "Pee'd-away" paint remover at areas of excessive paint build-up, scrape to sound original surface wood, replace deteriorated wood using malogany dutchnen and epoxy resin filler, prime and paint. See GF-18 (ALT to TS-9)

TS-9

Restore Belfry Opening Trajectory. (4 locations: tower N,E,S,W). At (original 1833) decorative screen and surface woodwork: scrape loose paint, replace deteriorated and missing wood using malogany dutchen and epoxy resin filler, prime and paint. Using existing as model, build exact replica of missing header at facade Using existing west elevation as model, restore six covered-over quatrefoil medallions below openings for remaining three elevations. Repair lead flashing (if any, or install new) at weather-exposed upper surfaces of tracery cut-outs and at rounded head casing trim, prime and paint. See GF-18 (ALT to TS-9)

TS-10

Restore East Elevation Lancer Windows Trajectory. (Two locations: north and south stairs) At (original 1833) deteriorated wood and glass, scrape loose paint, replace deteriorated wood using malogany dutchen and epoxy resin filler, prime and paint. Repair lead flashing (if any, or install new) at weather-exposed upper surfaces of tracery cut-outs and at rounded head casing trim, prime and paint. Coordinate with WW-4 and DW-5 window restoration. See GF-19 (ALT to TS-10)

GF

GLASS FIBER REINFORCED POLYMER (GFRP) RESTORATION ASSEMBLIES

Fabrication cost input by DuroFiber Inc, Architectural Fiberglass Inc. Installation cost input by American Steeple and Tower, Inc., Yankee Steeplejacket Company, Inc. Provide GFRP molded profile panels and semi-prefabricated assemblies for field attachment to galvanized steel framework, install new assemblies, install new wood or stucco cladding assemblies, scrape loose old paint, replace deteriorated wood, prime and paint. Repair lead flashing (if any, or install new) at weather-exposed upper surfaces of tracery cut-outs and at rounded head casing trim, prime and paint. Coordinate with WW-4 and DW-5 window restoration. Paint with Sherwin Williams DTM primer and two finish coats. Provide for each keynote line item: Fabrication cost $__, Shipping and Installation cost $___

GF-1

Tower Windows (4 locations). Mount to SF-7 armature on top of GF-4 pilasters

GF-2

Tower Roof Parapets (crenelated bartlettment, 4 locations). Mount to RF-15 and GF-4

GF-3

Tower Roof Edge Frieze Board Trim. (4 locations) Coordinate with RF-7 tower roof

GF-4

Tower Corner Octagonal Pilasters. (4 locations) Segments to wrap corners of tower over SF-7 armature and terminate at vertical wall attachment strips. Each vertical segment to flash with overlapped joints at horizontal rounded banding profiles.

GF-5

Eave Pinnacles. (4 locations) Mount to SF-5 and RF-9 snow rail

GF-6

Eave Parapets (crenelated bartlettment, 2 locations) Mount to RF-9 snow rail and SF-5 armature.

GF-7

Rake Balustrade. (2 locations) Mount to SF-8 armature

SF

STRUCTURAL AND FRAMING

Cost input by American Steeple and Tower, Inc., Yankee Steeplejacket Company, Inc.

SF-1

Remove Tower Roof. Demolish (c.1954) over-framed 2x8 @ 16" hip roof rafters and 5/8" plywood sheathing. Sister and extend original over-framed rafters as required for RF-7.

SF-2

Frame Entry Ramp. Reframe wood floor for depressed landing and ramp at front door. Framing consists of P/T 2x10 @16" suspended from existing supporting framing with galvanized hangers, allow for sistering and reduction of top to four supporting beams as part of the work.

SF-3

Frame New Windows. Wider window openings at Narthex (2 locations). Provide 3 ½" x 14" PSL headers and SF-7 Tower Pilasters and Pinnacles Armatures.

SF-4

Restore Entry Trim and Siding. At original (1833) flush board siding and decorative trimwork at pilaster base walls and gables, scrape loose paint, apply "Pee'd-away" paint remover at areas of excessive paint build-up, scrape to sound original surface wood, replace deteriorated wood using malogany dutchen and epoxy resin filler, prime and paint. See GF-16 (ALT to TS-5)

SF-5

Remove Vertical Tower Trim. At tower corners, remove (c.1954) vertical trim boards as required for new GFRP armature and cladding.

SF-6

Peep Tower Corners. At (c.1954) vertical flush wood siding at tower corners to be concealed by new GFRP assemblies, scrape loose paint, replace deteriorated wood, install ice and water shield membrane to accept SF-6 and SF-7 Tower Pilasters and Pilnattes Armatures.

SF-7

Restore Siding. At (c.1954) vertical flush wood siding to remain exposed: scrape loose paint, replace deteriorated wood, plug siding holes from wall insulation by others under FW-4 with wood plugs and epoxy resin filler for painting, prime and paint. See GF-14 (ALT to TS-3)

SF-8

Restore Buttresses. At existing wood buttresses (4 locations within Work Area), scrape loose paint, replace deteriorated wood, prime and paint. Match north side 2014 restoration work. See GF-15 (ALT to TS-4)

SF-9

Water table. Malogany water table trim at copper cap at bottom of wood siding, to cover FW-2/FW-3 insulation/stucco. See GF-16 (ALT to TS-5)

SF-10

Frame Entry Ramp. Reframe wood floor for depressed landing and ramp at front door. Framing consists of P/T 2x10 @16" suspended from existing supporting framing with galvanized hangers, allow for sistering and reduction of top to four supporting beams as part of the work.

SF-11

Remove Tower Roof. Demolish (c.1954) over-framed 2x8 @ 16" hip roof rafters and 5/8" plywood sheathing. Sister and extend original over-framed rafters as required for RF-7.

SF-12

Frame Entry Ramp. Reframe wood floor for depressed landing and ramp at front door. Framing consists of P/T 2x10 @16" suspended from existing supporting framing with galvanized hangers, allow for sistering and reduction of top to four supporting beams as part of the work.

SF-13

Frame New Windows. Wider window openings at Narthex (2 locations). Provide 3 ½" x 14" PSL headers and SF-7 Tower Pilasters and Pinnacles Armatures.

SF-14

Restore Entry Trim and Siding. At original (1833) flush board siding and decorative trinkwork at pilaster base walls and gables, scrape loose paint, apply "Pee'd-away" paint remover at areas of excessive paint build-up, scrape to sound original surface wood, replace deteriorated wood using malogany dutchen and epoxy resin filler, prime and paint. See GF-16 (ALT to TS-5)

SF-15

Remove Vertical Tower Trim. At tower corners, remove (c.1954) vertical trim boards as required for new GFRP armature and cladding.

SF-16

Peep Tower Corners. At (c.1954) vertical flush wood siding at tower corners to be concealed by new GFRP assemblies, scrape loose paint, replace deteriorated wood, install ice and water shield membrane to accept SF-6 and SF-7 Tower Pilasters and Pilnattes Armatures.

SF-17

Restore Siding. At (c.1954) vertical flush wood siding to remain exposed: scrape loose paint, replace deteriorated wood, plug siding holes from wall insulation by others under FW-4 with wood plugs and epoxy resin filler for painting, prime and paint. See GF-14 (ALT to TS-3)

SF-18

Restore Buttresses. At existing wood buttresses (4 locations within Work Area), scrape loose paint, replace deteriorated wood, prime and paint. Match north side 2014 restoration work. See GF-15 (ALT to TS-4)

SF-19

Water table. Malogany water table trim at copper cap at bottom of wood siding, to cover FW-2/FW-3 insulation/stucco. See GF-16 (ALT to TS-5)
5-22-20 Additional ALTERNATES IN GFRP in lieu of restoration of existing original and 1950's woodwork:

GF-12 (ALT to RF-6)
In lieu of RF-6, clad Spire in GFRP in original vertical plank surface texture. Following RF-1 at original spire roof, install stainless steel screws to secure projecting and loose existing lead-coated copper, install ice-and-waterproof membrane. Fabricate and install GFRP in original patterning of vertical sheeting boards and ribs. Paint GFRP with Sherwin Williams DTM primer and two finish coats.

GF-13 (ALT to at RF-11)
In lieu of RF-11, replace Belfry Louvers in GFRP (4 locations: tower N,E,S,W). Replace deteriorated red copper (c.1940s) belfry louvers. Coordinate sequence of removal and reinstallation with GF-10/GF-11 belfry opening work.

GF-14 (ALT to TS-3)
In lieu of TS-3, clad c.1954 vertical flush window siding in GFRP in original horizontal flush board siding surface texture. Install vertical spaced strapping and ventilate top and bottom. Paint GFRP with Sherwin Williams DTM primer and two finish coats.

GF-15 (ALT to TS-4)
In lieu of TS-4, clad existing wood buttresses (4 locations within Work Area) in GFRP in original vertical flush board siding surface texture. Install vertical spaced strapping and ventilate top and bottom. Paint GFRP with Sherwin Williams DTM primer and two finish coats.

GF-16 (ALT to TS-5)
In lieu of TS-5, fabricate and install GFRP water table trim at bottom of TS-3 cladding. Paint GFRP with Sherwin Williams DTM primer and two finish coats.

GF-17 (ALT to at TS-6)
In lieu of TS-6, replace Tower Lancet Window Tracery in GFRP. At (original 1833) Tower Lancet Window Tracery decorative screen and surface woodwork, using existing as model, replace existing painted wood with exact GFRP replica. Overlay top surface of rounded head casing trim with GFRP in matching profile. Paint GFRP with Sherwin Williams DTM primer and two finish coats.

GF-18 (ALT to TS-9)
In lieu of TS-9, replace Belfry Opening Tracery in GFRP. (4 locations: tower N,E,S,W). At (original 1833) decorative screen and surface woodwork, using existing as model, replace existing painted wood with exact GFRP replica. Using existing west elevation as model, build exact mahogany replica of six quatrefoil medallions below openings for remaining three elevations. Overlay top surface of rounded head casing trim with GFRP in matching profile. Paint GFRP with Sherwin Williams DTM primer and two finish coats.

GF-19 (ALT to TS-10)
In lieu of TS-10, replace East Elevation Lancet Windows Tracery in GFRP. At (original 1833) Lancet Window Tracery decorative screen and surface woodwork, using existing as model, replace existing painted wood with exact GFRP replica. Overlay top surface of rounded head casing trim with GFRP in matching profile. Paint GFRP with Sherwin Williams DTM primer and two finish coats.
EM-6 Exterior downlights at 3 locations. See drawings for locations. Estimated fixture cost $50 x 3 = $150 plus installation.

EM-7 Narthex and Stair exit lighting and signage. Fixtures and installation.

EM-8 Narthex and Stair heating and cooling system. Wall cassette heat pump system.

GS GENERAL CONDITIONS/SITE PROTECTION

GS-1 Tower and Spire Staging Cost input by American Steeple and Tower, Inc., Yankee Steeplejack Company, Inc.

GS-2 Burial Ground Fence Protection

GS-3 Site Fence/Sidewalk Protection

end