FRIENDS MEETING OF WASHINGTON

CONCEPT DESIGN
Meeting House
Building Analysis

by
QUINN EVANS | ARCHITECTS

Friend's Meeting House
May 2009
FRIENDS MEETING OF WASHINGTON

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Friend's Meeting House

May 2009
INTRODUCTION

Quinn Evans | Architects (QE|A) has been commissioned by the Friends Meeting of Washington to 1) develop a master plan for development on the Friends Meeting site on Florida Avenue in Washington, DC and 2) propose and develop a design for modifications to the historic Meeting House building that will mitigate existing water infiltration issues, provide universal accessibility throughout the building and include sustainable design (green) concepts. As part of this effort, QE|A has developed an analysis of the existing conditions of the Meeting House.

A non-destructive visual analysis of the interior of the Meeting House has been provided in order to evaluate the existing condition of finishes, fixtures and systems of the building. Where appropriate, we have included potential repairs or modifications to the existing structure that will enhance the appearance and / or functionality of the spaces. The Meeting House and its architectural features and finishes are considered to be ‘historic’ therefore the proposed measures are consistent with the Secretary of Interior’s Standards for Rehabilitation.

MEETING HOUSE BUILDING ANALYSIS

The original Meeting House was built in 1930, a later addition was added to the south end of the Meeting House in the 1950’s. The entire Meeting House was built of cast-in-place concrete faced in schist stone with single glazed wood windows. The original Meeting House has an asphalt shingle roof, the 1950’s addition has a slate shingle roof.

The interior of the building could be characterized as ‘simple’, most walls are constructed with a plaster finish with minimal detailing. A great deal of the original material is still in place and in good shape.

Summary of Conditions

The Meeting House is in good condition and maintains a great deal of the original material. A substantial amount of work outlined herein is aesthetic in nature, no obvious structural repairs are required. Given the scope of work of Quinn Evans | Architects, this report addresses the building elements in most need of attention. (i.e. in ‘fair’ or ‘poor’ condition). Fair condition defines those elements in need of refinishing or minimal repair. Poor condition defines those elements in need of significant repair or replacement.

Friend’s Meeting House

May 2009
WATER INFILTRATION

Water infiltration issues are prevalent within the Meeting House building. The following is an analysis of these water infiltration issues based on the site survey and an investigation of the original construction documents of the existing building.

Water Bubbles up Through the Slab at the Kitchen
Based on the original drawings, a continuous foundation drain was installed underneath the slab just inside the exterior foundation walls at the Lower Level. The foundation drain line feed to a sump in the Furnace Room at the northern end of the Meeting House. Tom Cook of the FMW reports that water has bubbled up through the concrete floor slab at the entry to the Kitchen from the Assembly Room.

Solution: The foundation drain lines should be cleaned out for their full length.

Water Infiltration Through Walls at Window Wells
There are six window wells along the perimeter of the Meeting House. Each window well has an areaway drain. Over time, these drains have clogged and rain water has overflowed directly into the adjacent interior space.

Solution: The window well drains should be cleaned out to a distance of at least 100 feet. A steel grille should be provided at each window well to keep trash and leaves out.

Water Infiltration through Exterior Kitchen Door
In the Fall of 2008, new site interceptor drains were added to the landscape in hopes of mitigating the water infiltration issues. These drains ‘outfall’ into an open drain located in the areaway adjacent to the Lower Level Kitchen. Because of this added stormwater, the capacity of the existing areaway drainer is being overcharged and water is backing up into the areaway and, ultimately, into the Kitchen.

Solution: The drain line for the new site interceptor drains should be redirected along the side of the building to the combined sewer line under Decatur Place.

Friend’s Meeting House

May 2009
Overflow of Downspout Inlets
There are three existing exterior downspouts that are directed into cast iron inlets (or 'boots'). According to the original construction drawings, these drain lines extend under the building slab to a central combined stormwater / sewer drain line. During heavy rains, these drains overflow at the top of the boot thus retaining the ground water in this area.

Solution: The downspouts should be cleaned out for a distance of 100 feet and permanent cleanouts should be installed to permit future maintenance. Further, we recommend that the central combined stormwater / sewer line be cleaned out and a clean-out be installed to permit future maintenance.

Water Infiltration into the Decatur Room
Water infiltrates into the Decatur Room through the wall and around the window. The upper areaway and terrace drain into the lower areaway adjacent to the Decatur Room through two scuppers. When this areaway fills, it causes water to leak into the adjacent space.

Solution: The scuppers are blocked with leaves and should be cleaned out. The drains and the drain lines should be cleaned out.

Meeting House Roof Leaks
Over the years, there have been two minor roof leaks above the Meeting Room. Upon inspection within the attic, it is clear that wind-driven rain is entering at the roof ridge vent, running down the underside of the wood decking, and dropping to the attic floor/ceiling. The asphalt roofing shingles are about 20 years old therefore they have about 10 more years of service life.

Solution: The ridge vent should be replaced with a custom fabricated copper assembly that will provide greater protection against wind-driven rain.
BUILDING INTERIOR ANALYSIS
Most of the building materials inside the Meeting House is original. With minor repairs and enhancements, the Meeting House can be a more welcoming and enjoyable place.

Lower Level
The Lower Level is currently the main entry level to the Meeting House and contains most of the support functions for the Friends Meeting complex. Because of the terrain of the area, the Lower Level is completely below grade to the north and east. Access is obtained to the Lower Level via the front door on the south facade along Decatur Place and a pair of doors along the west facade into both the Assembly Room and the Kitchen.

Walls
The walls on the Lower Level are the original plaster walls with wood baseboards. In certain areas, the walls are enhanced with a wood wainscot or a wood chair rail. There are multiple areas of plaster that are water damaged.

Solution: All of the walls should be ‘sounded’ to determine the extent of plaster damage and where the plaster is separating from the supporting lath beyond. In these areas, it should be confirmed that the lath has a proper connection to the structural framing before the plaster is replaced. In areas of restoration, a metal lath can be used to replace the original wood lath as necessary.

The Secretary of Interior’s Standards does not recommend that gypsum wallboard be used as an appropriate substitute material for plaster.

Floor
Throughout the Lower Level, the prevalent Vinyl Composition Tile (VCT) is cracked and discolored.

Solution: The tile should be taken up and replaced with new tile or carpet.
The steps in the Main Hall including the steps at the front door and the wood stairs leading to the Main Level are covered with an anti-slip vinyl.

Solution: The vinyl anti-slip covers should be removed and any damaged caused by them repaired. The wood stairs should be refinished and stained. New anti-slip devices that do not compromise the historic integrity of the steps shall be used.

**Ceiling**

The ceilings of the Lower Level are either cast in place concrete, plaster or dropped 2x4 acoustic ceiling tile (ACT).

The ACT has been recently replaced and is in good condition but is not an appropriate application within a historic structure.

The concrete ceilings are in good repair but they leave the HVAC ducts exposed and detract from the aesthetics of each room.

Solution: Gypsum wall board (GWB) ceilings should replace the areas with ACT tile ceiling. The HVAC ducts should be configured to best be hidden by new drop ceilings or new bulkheads.

**Trim, Casework and Decorative Elements**

Wood baseboard runs throughout the Lower Level. The baseboards vary from good to poor condition depending on its location and exposure to moisture.

Solution: All of the wood baseboard shall be stripped and refinished. Where damaged beyond repair, the baseboard should be replaced in kind (i.e. storage room, west wall of office 108).
Likewise, all wood trim including the existing chair rail moulding, and door and window casings within the building shall be stripped and repainted.

The wooden stair rail along the east wall of the hallway up from the entry vestibule is loose and needs to be tightened. It also needs to be extended at least one foot past the top riser in order to meet the applicable building code.

**Doors and Windows**

Many of the doors within the building are metal wrapped wood core doors and have sustained damage.

Solution: Because it is unlikely this condition can be repaired, the damaged doors shall be replaced with a wood paneled door to match. All wood doors shall be stripped and repainted.

Every lock in the building has a different key thus compromising the operational effectiveness of the facility.

Solution: A comprehensive re-keying effort shall be provided.

The windows on the Lower Level are wood frame and single-glazed. Most of the windows are in good shape. A window in the library (106) has a broken muntin. The window frames in office (108) are in poor condition.

Solution: The windows in good condition shall be stripped and refinished. The damaged windows shall be repair as required.

**Lighting**

The lighting on the Lower Level is typically fluorescent lighting, either recessed in the ACT drop ceilings or ceiling mounted fixtures in the offices, storage room and furnace room. The plexiglass lenses of the recessed fixtures have
recently been replaced. Ceiling mounted pendant fixtures have been installed in the Entry Hall and are in good condition.

Solution: Within the 'public' areas of the Meeting House, the fluorescent light fixtures shall be replaced with compact fluorescent downlights and ceiling mounted fixtures.

**Plumbing Fixtures**

The existing toilet fixtures and lavatories on the Lower Level (3 toilets and 1 urinal) are outdated and inefficient.

Solution: The existing fixtures shall be replaced with low flow fixtures.

**HVAC**

The furnace and air handling units for the building are new. The layout of the duct work is ineffective. The rooms in which the ducts are exposed are the kitchen (104), storage room (102), hallway (105), the office (108) and both bathrooms (110/111).

Solution: At a later phase of the project, a mechanical engineer will be commissioned to evaluate the effectiveness of the existing mechanical system. The ductwork shall be reworked where required or covered with a drop ceiling or soffit.
Main Level

The Main Level is considered the most historically significant area of the building and shall be preserved to the greatest extent possible.

Walls

The plaster walls on the Main Level including the wood baseboards are original to the building. Wood wainscoting or wood chair rail are added in selected areas. There is limited water damage on the Main Level.

Solution: The damaged and cracking portions of the plaster surface should be repaired, every step should be taken to make the patch/repair as seamless as possible. The Secretary of Interior's Standards does not recognize gypsum wallboard as an appropriate substitute material for plaster.

Floor

The Main Level has many different types of flooring. The parlor/library (202/203) and part of the hallway (207) have wood floors. The meeting room (201) has cork tile flooring. The tile floor is significantly worn. The classroom (204) has VCT and worn.

Solution: The wood floors shall be sanded and refinished. The cork floor tile shall be replaced. The VCT shall be replaced.

Ceiling

The ceiling on the Main Level is plaster. The plaster is in good condition in the parlor/library (202/203), the hallway (207) and both bathrooms (205/206). The plaster ceiling in the meeting room (201) has been damaged by water
near the southeast HVAC vent (see picture to the right). This damage is caused by water infiltration at the roof ridge vent. Acoustic tiles are attached to the plaster ceiling in the classroom (204) with an adhesive.

Solution: The tiles and adhesive should be removed from the plaster ceiling and the plaster below repaired.

Trim, Casework and Decorative Elements

The parlor (202/203), hallway (207) and meeting room (201) all have wainscot trim. The cabinets, bookcases and mantle surround in the parlor (202/203) are in excellent condition. It is suggested that the unused air handlers in the cabinets underneath the windows be removed.

Solution: The wood trim on the Main Level including the wainscot, and window and door trim shall be stripped and repainted.

Doors and Windows

Many of the doors within the building are metal wrapped wood core doors and have sustained damage.

Solution: Because it is unlikely this condition can be repair, the damaged doors shall be replaced with a wood paneled door to match. All wood doors shall be stripped and repainted.

The metal trim above the parlor door (room 202) is damaged and should be repaired and refinished. The panic hardware on the double exterior door in the hallway (207) is damaged and does not work and should be replaced (see bottom right image).

Every lock in the building has a different key thus compromising the operational effectiveness of the facility.

Solution: A comprehensive re-keying effort shall be provided.
The windows on the Main Level are wood frame and single glazed. Most of the windows are in good shape. There is some water damage to the windows in the Meeting Room and the window glazing in the Meeting Room (201) is badly deteriorated.

Solution: The windows in good condition shall be stripped and refinished. The damaged windows shall be repair as required.

The handicap access doors on the northside of the meeting room are not effective in their configuration. The automatic door button only opens the interior right leaf door and not the exterior doors. One leaf of the double doors is not wide enough for ADA access.

Solution: Both sets of doors and both leaves of both doors need to be made ADA accessible and operable.

Lighting

The lighting at the Main Level is new and in good condition. The meeting room has only cove lighting above the sound- ing board and relies mainly on natural lighting.

Solution: The parlor (202), library (203), classroom (204) and bathrooms (205/206) all have new light fixtures that shall remain.

Plumbing Fixtures

Both bathrooms (205/206) on the second floor have been newly renovated and are ADA accessible. No changes or repairs are necessary.

Paint

All peeling paint shall be removed and patched where needed in preparation for new paint.
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<th>Qty</th>
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<th>Cost/GSF</th>
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**Total Cost w/FEE's & Contingencies**  
3,359,444  
228.58

**Total Construction Costs:**  
3,359,444  
228.58
## COST MODEL OVERALL SUMMARY

**Pre-Design Phase**
May 21, 2009

**Total Project Floor Area (GSF)** 14,697

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**Direct Cost Subtotal:**

- Design Contingency: 10.00 % 233,295 15.87
- Estimate & Bid Contingency: 10.00 % 233,295 15.87
- Escalation: (Current Costs) 0.00 % 0 0.00
- Construction Phase Contingency: By Owner 0.00

**Contingencies Subtotal:**

| General Requirements/Staff/Fee | 10 % | 279,954 | 19.05 |
| General Conditions             | 10 % | 279,954 | 19.05 |
| Permits (Allowance)            | By Owner | 0 | 0.00 |

**Indirect Cost Subtotals:**

| Total Construction Costs: | 3,359,444 | 228.58 |

**Summary:**
- Friend's Meeting of Washington
- Future Improvements & Renovations
- May 21, 2009
- Total Project Floor Area: 14,697 SF
### Cost Model Detail

#### Pre-Design Phase

**May 21, 2009**

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<td>Building Addition (sf): 2,620</td>
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<td>Interior Restoration (sf): 12,077</td>
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**TOTAL SITE WORK:** 699,125  \( \frac{39.95}{5} \)
### COST MODEL DETAIL

#### Pre-Design Phase
May 21, 2009

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<tr>
<th>Building Area Summary</th>
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<td>Total Facility (sf):</td>
<td>32,197</td>
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<th>ITEM DESCRIPTIONS</th>
<th>QTY</th>
<th>UNIT</th>
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<th>TOTAL</th>
<th>$/SF</th>
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</tr>
<tr>
<td>HVAC System (Ventilation)</td>
<td>2,620 sf</td>
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<tr>
<td>D40 FIRE PROTECTION</td>
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<td>Fire Protection</td>
<td>2,620 sf</td>
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<td>2.75</td>
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<tr>
<td>D50 ELECTRICAL</td>
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<tr>
<td>Electrical Service &amp; Distribution</td>
<td>2,620 sf</td>
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<td>1.56</td>
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<tr>
<td>Lighting and Branch Wiring</td>
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<td>Photovoltaic System</td>
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<td>E10 EQUIPMENT</td>
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<tr>
<td>Way Signage</td>
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<tr>
<td>E20 FURNISHINGS</td>
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<tr>
<td>Furnishings, Fixtures and Equipment (By Owner)</td>
<td>NIC</td>
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<tr>
<td>F20 SELECTIVE BUILDING DEMOLITION</td>
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**TOTAL BUILDING ADDITION** | 772,211 | 294.74 |
# Future Improvements & Renovations

## Building Area Summary
- Site Work (sf): 17,500
- Building Addition (sf): 2,620
- Interior Restoration (sf): 12,077
- Total Facility (sf): 32,197

## Interior Restoration

### A20 Basement Construction
- 12,077 sf

### B10 Superstructure
- Sub on Grade
  - 0 sf

### B20 Exterior Enclosure
- Waterproof Existing Walls
  - 2,184 sf

### B30 Roofing
- Replace Existing Ridge Vent
  - 75 sf
- Misc Roof Patch Allomance
  - 1 sf

### C Interiors
- Sound/Patch Existing Plaster Walls
  - 12,077 sf
- Misc Plaster Ceilings and Bulkheads
  - 4,500 sf
- Tile Bathrooms
  - 272 sf
- New Kitchen Cabinets (Allowance)
  - 1 sf
- New Kitchen Appliances (see E10 EQUIPMENT)
  - 0 sf
- Repair/Replace Existing Flooring
  - 12,077 sf
- Millwork/Wainscot Refinishing
  - 444 sf
- Window Restoration/Painting
  - 23 sf
- Existing Doors/Restoration
  - 4 sq
- New Doors
  - 12,077 sf
- Painting/Prep Walls
  - 1 sf
- Hardware Allowance

### D20 Plumbing
- Plumbing Systems
  - 12,077 sf

### D30 HVAC
- HVAC System (Condition Space)
  - 12,077 sf

### D40 Fire Protection
- Fire Protection
  - 12,077 sf

### D50 Electrical
- Electrical Service & Distribution
  - 12,077 sf
- Lighting and Branch Wiring
  - 12,077 sf
- Communications & Security
  - 12,077 sf

### E10 Equipment
- Kitchen Equipment (Allowance)
  - 1 sf

### E20 Furnishings
- Furnishings, Fixtures and Equipment (By Owner)
  - NIC

### F20 Selective Building Demolition
- None

### Total Interior Restoration

## Total Direct Construction Costs Without Contingencies

Pre-Design Cost Model

---

**The Christman Company**
# COST MODEL DETAIL

## Pre-Design Phase

May 21, 2009

### Building Area Summary

<table>
<thead>
<tr>
<th>Item Description</th>
<th>SQ FT</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Site Work</td>
<td>17,500</td>
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</tr>
<tr>
<td>Building Addition</td>
<td>2,620</td>
<td></td>
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<tr>
<td>Interior Restoration</td>
<td>12,077</td>
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<tr>
<td>Total Facility</td>
<td>32,197</td>
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### Item Descriptions

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<tr>
<th>QTY</th>
<th>UNIT</th>
<th>COST</th>
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<th>TOTAL</th>
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