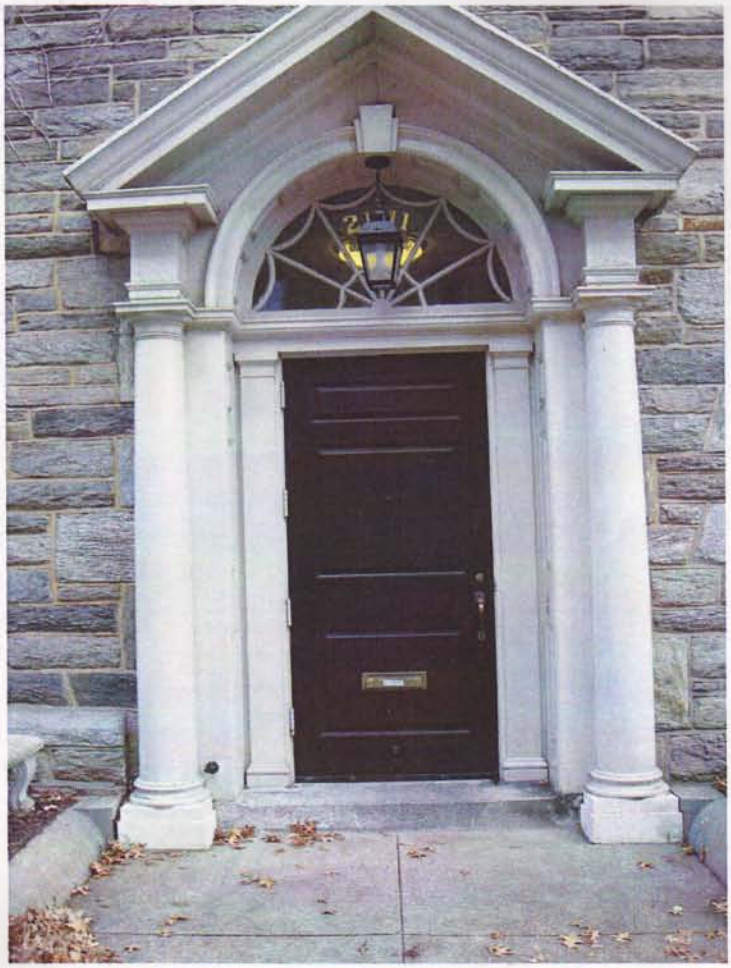
FRIENDS MEETING OF WASHINGTON

CONCEPT DESIGN

Meeting House Building Analysis



by
QUINN EVANS | ARCHITECTS

FRIENDS MEETING OF WASHINGTON

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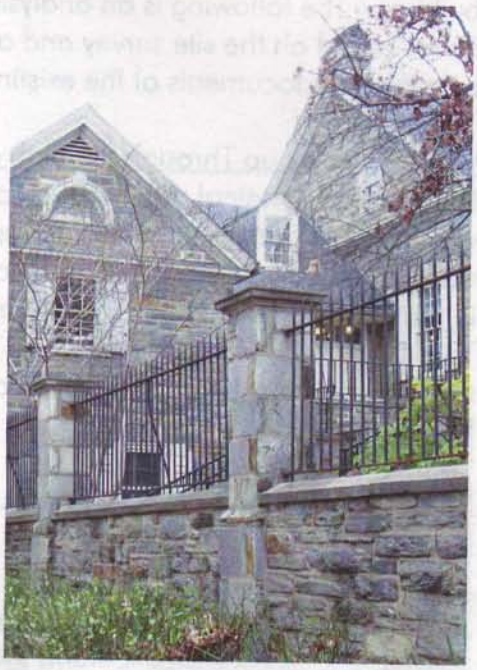
FRIENDS MEETING OF WASHINGTON

INTRODUCTION

Quinn Evans | Architects (QE|A) has been commissioned by the Friends Meeting of Wahsington 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 enite 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.

FRIENDS MEETING OF WASHINGTON

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.

Areaway at Kitchen

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 ther 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.

Lower Level Window Wells

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 overcharge and water is backing up into the areaway and, ultimiately, 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.

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 maintenace.

Water Infiltration into the Decatur Room

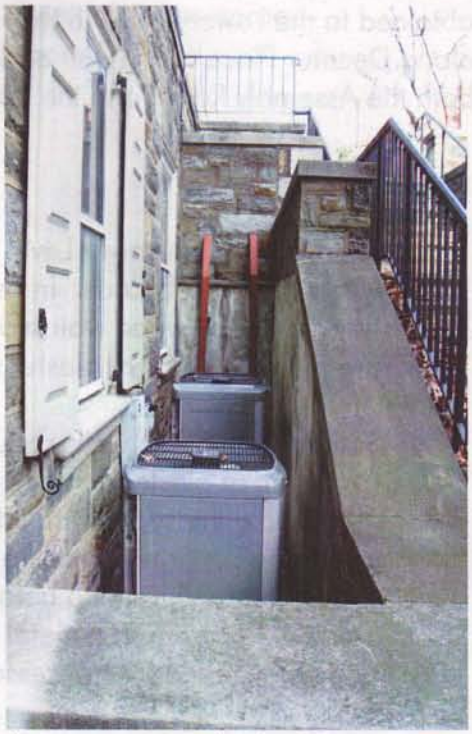
Water infiltrates into the Decatur Room through the wall and around the window. The upper areaway and terrace drain into the lower areaway adjacent to the Decatur Room through two scuppers. When this areaway fills, it causes water to leak into the adjacent space.

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.



Areaways outside the Decatur Room with two red scuppers

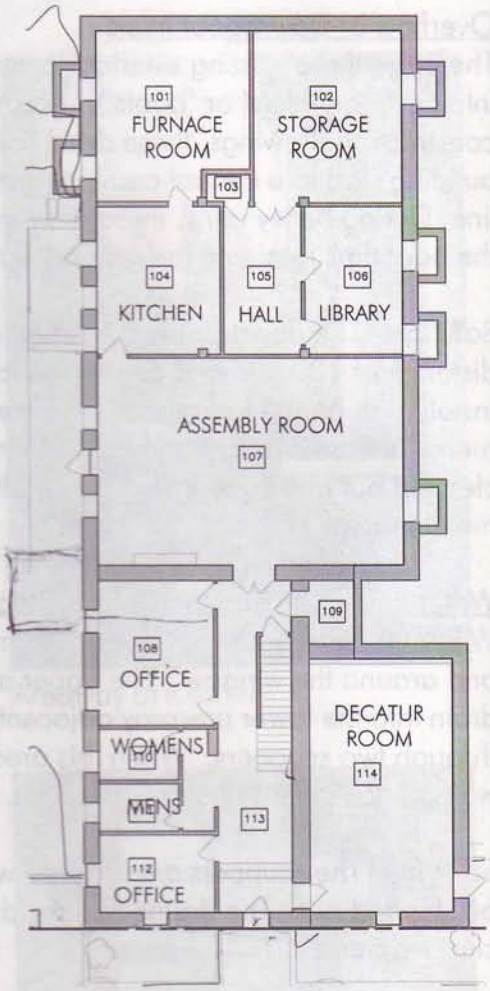
FRIENDS MEETING OF WASHINGTON

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.



LOWER LEVEL

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 ares, 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 subsitute 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 a 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.

Original tile at storage room (102)

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.

Baseboard at 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 repair, the damaged doors shall be replaced with a wood paneled door to match. All wood doors shall be stripped and re-painted.

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 munton. 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

Door at office (112)

Window at office (108)

Assembly room ceiling

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 flourescent downlights and ceiling mounted fixtures.

Light fixtures in first floor hall

Plumbing Fixtures

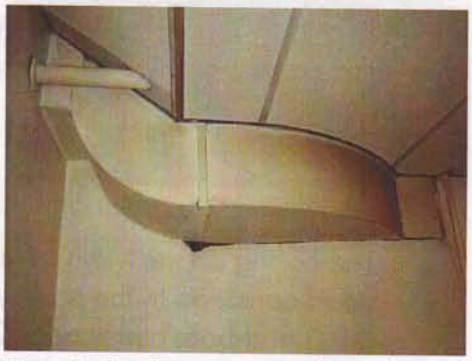
The existing toilet fixtures and lavatories on the Lower Level (3 toilets and 1 urinal) are outdated and inefficient.

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

HVAC

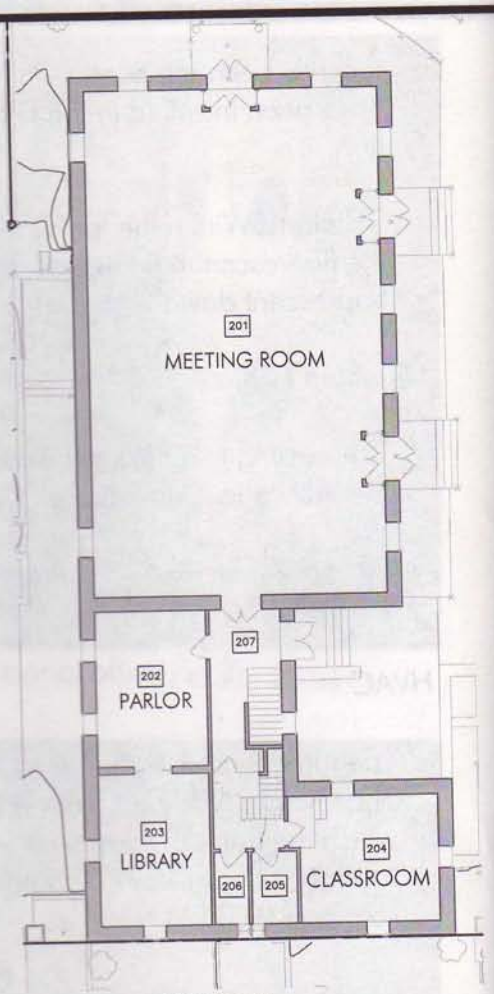
The furnace and air handling units for the building are new. The layout of the duct work is ineffective. The rooms in which the ducts are exposed are the kitchen (104), storage room (102), hallway (105), the office (108) and both bathrooms (110/111).

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.



Duct in kitchen coming from furnace room

FRIENDS MEETING OF WASHINGTON



MAIN LEVEL

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 wainscot 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 subsitute 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.

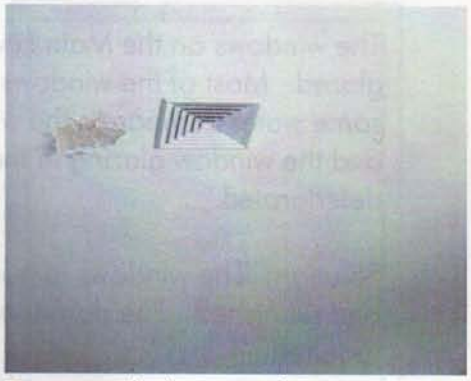
Ceiling

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

Cork tile flooring at Meeting Room (201)

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.



Damaged plaster ceiling in Meeting Room (201) from a rooof leak

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.

Air handling unit inside cabinetry at the Library/Parlor

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.

Water damage at Meeting Room (201) windows

Lighting

The lighting at the Main Level is new and in good condition. The meeting room has only cove lighting above the sounding 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.

Second floor vestibule doors in hall

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 preperation for new paint.

CHRISTMAN
SINCE 1894

COST MODEL SUMMARY BY AREA

riend's Meeting of Washington
ıture Improvements & Renovations

Pre-Design Phase
May 21, 2009

Total Project Floor Area 14,697

Description	Current Cost Model Qty	Unit	Cost	Cost/GSF
Site Work	17,500	SF	1,006,740	57.53
Building Addition	2,620	SF	1,111,984	424.42
Renovations	12,077	SF	1,122,640	92.96
Fire Suppression System (Alternate)	14,697	SF	118,080	8.03
Total Cost w/FEE's & Contingencies			**3,359,444**	**228.58**
Total Construction Costs:			**3,359,444**	**228.58**

CHRISTMAN
SINCE 1894

COST MODEL OVERALL SUMMARY

Friend's Meeting of Washington
Future Improvements & Renovations

Pre-Design Phase
May 21, 2009

Total Project Floor Area (GSF) 14,697

Description	Current Cost Model Qty	Unit	Cost	Cost
Site Construction Costs	17,500	SF	699,125	39.95
Building Addition	2,620	SF	772,211	294.74
Interior Restoration	12,077	SF	779,611	64.55
Fire Suppression System (Alternate)	14,697	SF	82,000	5.58
Direct Cost Subtotal:			**2,332,947**	**158.74**
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:			**466,589**	**31.75**
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:			**559,907**	**38.10**
Total Construction Costs:			**3,359,444**	**228.58**

COST MODEL DETAIL

Pre-Design Phase

May 21, 2009

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

ITEM DESCRIPTIONS	QTY	UNIT	COST	TOTAL	TOTAL	$/SF
SITE WORK	17,500	sf				
G10 SITE PREPARATION						
Site Prep & Demolition	17,500	sf	2.00	35,000		
Cut to Fill	17,500	sf	6.75	118,125		
Borrow Material	17,500	sf	0.50	8,750		
Cistern/Trench Drains	1	ls	9,000	9,000		
					170,875	9.76
G20 SITE IMPROVEMENTS						
Finish Grade	17,500	sf	2.50	43,750		
Sidewalk/Steps/Ramps/Pavers	4,500	sf	6.00	27,000		
Schist Stone Retaining Walls	2,400	sf	115.00	276,000		
Misc Site Improvements	1	ls	6,500	6,500		
Landscape/Irrigation Allowance	1	ls	150,000	150,000		
					503,250	28.76
G30 SITE MECHANICAL UTILITIES						
Water Supply/Fire Protection Main	1	ls	0.00	0		
Sanitary Sewer/Excavation/Backfill	1	ls	10,000.00	10,000		
Storm Drains/Sewer/Clean outs	1	ls	15,000.00	15,000		
Natural Gas		ls	0.00	0		
					25,000	1.43
G40 ELECTRICAL UTILITIES						
Electrical Distribution		ls	0.00	0		
					0	0.00
			TOTAL SITE WORK		**699,125**	**39.95**

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ITEM DESCRIPTIONS	QTY	UNIT	COST	TOTAL	TOTAL	$/SF
BUILDING ADDITION	2,620	sf				
A20 BASEMENT CONSTRUCTION						
Foundations	1,100	sf	10.00	11,000		
Slab on Grade	1,100	sf	4.00	4,400		
					15,400	5.88
B10 SUPERSTRUCTURE						
Stair System	3	flgt	15,000.00	45,000		
Wood Structure Framing	2,620	sf	11.00	28,820		
					73,820	28.18
B20 EXTERIOR ENCLOSURE						
Exterior Wall Systems	2,730	sf	75.00	204,750		
Exterior Windows	1,140	sf	60.00	68,400		
					273,150	104.26
B30 ROOFING/THERMAL PROTECTION						
Slate Roof	950		50.00	47,500		
Gutters & Downspouts	32,224	sf	2.00	64,448		
Flat Roof	126		3.50	441		
Skylights	256		50.00	12,800		
					125,189	47.78
C INTERIORS						
Plaster Walls & Ceilings	4,680	sf	11.00	51,480		
Doors/Frames/Hardware/Millwork	2,620	sf	10.00	26,200		
Flooring	2,620	sf	5.00	13,100		
Painting	8,200	sf	2.00	16,400		
					107,180	40.91
D10 CONVEYING						
Elevator	2	stop	40,000	80,000		
					80,000	30.53
D20 PLUMBING						
Plumbing Fixtures	2,620	sf		0		
					0	0.00
D30 HVAC						
HVAC System (Ventilation)	2,620	sf	9.00	23,580		
					23,580	9.00
D40 FIRE PROTECTION						
Fire Protection	2,620	sf	2.75	7,205		
					7,205	2.75
D50 ELECTRICAL						
Electrical Service & Distribution	2,620	sf	1.56	4,087		
Lighting and Branch Wiring	2,620	sf	5.00	13,100		
Photovoltaic System	500	sf	80.00	40,000		
					57,187	21.83
E10 EQUIPMENT						
Way Signage		NIC		0		
					0	0.00
E20 FURNISHINGS						
Furnishings, Fixtures and Equipment (By Owner)		NIC		0		
					0	0.00
F20 SELECTIVE BUILDING DEMOLITION						
Misc	1	ls	9,500.00	9,500		
					9,500	3.63
TOTAL BUILDING ADDITION					**772,211**	**294.74**

COST MODEL DETAIL

Pre-Design Phase

May 21, 2009

Building Area Summary	
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ITEM DESCRIPTIONS	QTY	UNIT	COST	TOTAL	TOTAL	$/SF
INTERIOR RESTORATION	12,077	sf				
A20 BASEMENT CONSTRUCTION		NIC				
B10 SUPERSTRUCTURE					0	0.00
Slab on Grade	0	sf		0		
B20 EXTERIOR ENCLOSURE					0	0.00
Waterproof Existing Walls	2,184	sf	8.00	17,472		
B30 ROOFING					17,472	1.45
Replace Existing Ridge Vent	75	lf	100.00	7,500		
Misc Roof Patch Allowance	1	ls	2,500.00	2,500		
C INTERIORS					10,000	0.83
Sound/Patch Existing Plaster Walls	12,077	sf	7.50	90,578		
Misc Plaster Ceilings and Bulkheads	4,500	sf	11.00	49,500		
Tile Bathrooms	272	sf	9.00	2,448		
New Kitchen Cabinets (Allowance)	1	ls	65,000	65,000		
New Kitchen Appliances (see **E10 EQUIPMENT**)	0	ls	0	0		
Repair/Replace Existing Flooring	12,077	sf	5.00	60,385		
Millwork/Wainscot Refinishing	12,077	sf	1.25	15,096		
Window Restoration/Painting	444	sf	100.00	44,400		
Existing Doors/Restoration	23		1,000.00	23,000		
New Doors	4	ea	5,000.00	20,000		
Painting/Prep Walls	12,077	sf	3.00	36,231		
Hardware Allowance	1	ls	25,000.00	25,000		
D20 PLUMBING					431,638	35.74
Plumbing Systems	12,077	sf	6.50	78,501		
D30 HVAC					78,501	6.50
HVAC System (Condition Space)	12,077	sf	2.00	24,154		
D40 FIRE PROTECTION					24,154	2.00
Fire Protection	12,077	sf	5.00	60,385		
D50 ELECTRICAL					60,385	5.00
Electrical Service & Distribution	12,077	sf	1.00	12,077		
Lighting and Branch Wiring	12,077	sf	5.00	60,385		
Communications & Security	12,077	sf	0.00	0		
E10 EQUIPMENT					72,462	6.00
Kitchen Equipment (Allowance)	1	ls	85,000.00	85,000		
E20 FURNISHINGS					85,000	7.04
Furnishings, Fixtures and Equipment (By Owner)		NIC		0		
F20 SELECTIVE BUILDING DEMOLITION					0	
None		NIC		0		
TOTAL INTERIOR RESTORATION					0	0.00
					779,611	64.55
TOTAL DIRECT CONSTRUCTION COSTS WITHOUT CONTINGENCIES					2,250,947	69.91

COST MODEL DETAIL

Pre-Design Phase

May 21, 2009

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ITEM DESCRIPTIONS	QTY	UNIT	COST	TOTAL	TOTAL	$/SF