Report of

Comprehensive Facilities Condition Assessment & Space Utilization Survey

For

District of Columbia Department of Fire and Emergency Medical Services
Engine Company No. 12
2225 5th Street, NE
Washington, D.C. 20002

Mayor Adrian M. Fenty

Published October 2009, by
District of Columbia Department of Real Estate Services
Robin-Eve Jasper, Director
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October 5, 2009

District of Columbia Department of Real Estate Services
Construction Services Division
2000 14th Street, N.W., Fifth Floor
Washington, D.C. 20009

Attention: Mr. Amar Singh
Project Manager

Reference: Report of Comprehensive Facilities Condition Assessment & Space Utilization Survey
Engine Company No. 12
2225 5th Street NE
Washington, D.C. 20002
Faithful+Gould Project No. 55561-10
District of Columbia Contract Number POAM-2004-C-0044-14-CA

Dear Mr. Singh:

Faithful+Gould, Inc. has completed a report of our Comprehensive Facility Condition Assessment and Space Utilization Survey of the Engine Company No. 12 building located at 2225 5th Street, NE in Washington, D.C. ("the Property").

This report provides a summary of the project information known to us at the time of the study, the scope of work performed, an evaluation of the visually apparent condition of the Property, identification of potential sustainability improvements, a forecast of capital and maintenance expenditures required over the next six-years and development of an occupancy profile to include production of floor plans and summarizing of the current utilization of occupiable space.

This report was completed in general accordance with the District of Columbia issued Statement of Works and Faithful+Gould's revised proposal for Facility Condition Assessment as authorized under Purchase Order 287952 by Ms. Diane B. Wooden of the District of Columbia Construction, Design and Building Renovation Commodity Group on January 3, 2009.

It has been a pleasure working with you on this project, and we look forward to working with you on future projects.

Very Truly Yours,

Richard W. Monat
Registered Architect

Richard A. Needler, AIA
Scope Compliance & Technical Review

cc. File

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EXECUTIVE SUMMARY

Engine Company No. 12 is located at 2225 5th Street in Northeast Washington D.C. ("the Property") and is a one- and two-story, concrete framed fire station. The Property, developed in 1987 and currently occupied by the District of Columbia's Fire and EMS Department, is of Construction Type I and situated on a 0.48 acre (21,199 gross square foot) site. The site is bounded by Rhode Island Avenue NE on the northwest and 5th Street NE on the southwest, with commercial properties on the remaining boundaries.

The Property is not currently listed on the District of Columbia's Inventory of Historic Properties and is served by Metrobus service, with stops along Rhode Island Avenue NE and the Rhode Island Avenue – Brentwood Metrorail subway station is located approximately 0.5 mile to the northeast of the Property.

On March 17 and May 27, 2009, Richard W. Monat and Richard A. Needler of Faithful+Gould visited the Property to observe and document the condition of the building and site components. During our site visit, Faithful+Gould was briefly assisted by Fire Fighter John Chada.

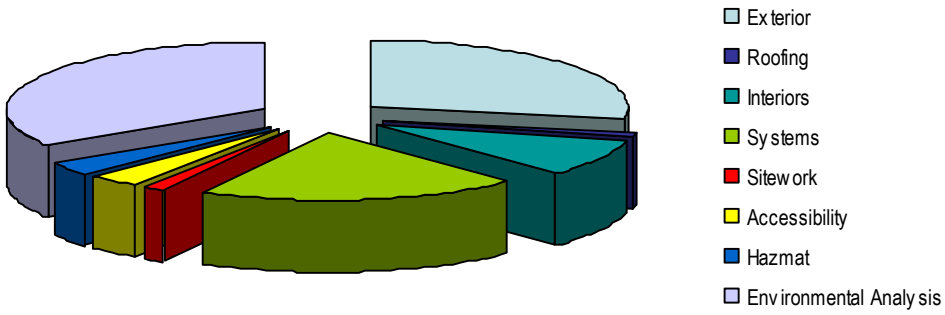
The purpose of this report is to identify visually apparent deficiencies in the building and site systems, determine capital and maintenance costs required over the next six-years calculate the Facility Condition Index (FCI) of the Property and develop an occupancy profile to include production of floor plans. Based upon the calculated FCI, the Property is in **good condition,** with a **0.10** rating reflective of a **total Deferred Maintenance expenditure requirement of $228,077 over the six-year study period.** Refer to the next page for further discussion of the Property's Facility Condition Index.

The most pressing facility condition related issues affecting the Property are summarized in Table EX-1, Chart EX-2, and the cost tables included within Appendices A and B.

Table EX-1 Primary Expenditures

Project	Expenditure Type	Cost	Year
Exterior Closure	Condition	$95,400	2010
Interiors	Condition	$30,539	2010, 2011
Services	Condition	$72,021	2010 - 2015
Accessibility Issues	Code Compliance	$11,980	2010

Chart EX-2 Expenditure by System



FACILITY ATTRIBUTE TABLE

ENGINE COMPANY NO. 12

PROPERTY DETAILS

ADDRESS: 2225 5TH STREET, NE
WASHINGTON, DC 20002

NEAREST INTERSECTION: RHODE ISLAND AVENUE, NE & 5TH STREET, NE

SQUARE: 0131 LOT: 0216 QUAD-WARD: NE-5

HISTORIC DISTRICT: YES ☐ NO ☒

HISTORIC BUILDING: YES ☐ NO ☒

GROSS SQUARE FOOTAGE OF BUILDING: 15,913

GROSS SQUARE FOOTAGE OF LAND: 21,199 (APPROX. 0.48 ACRES)

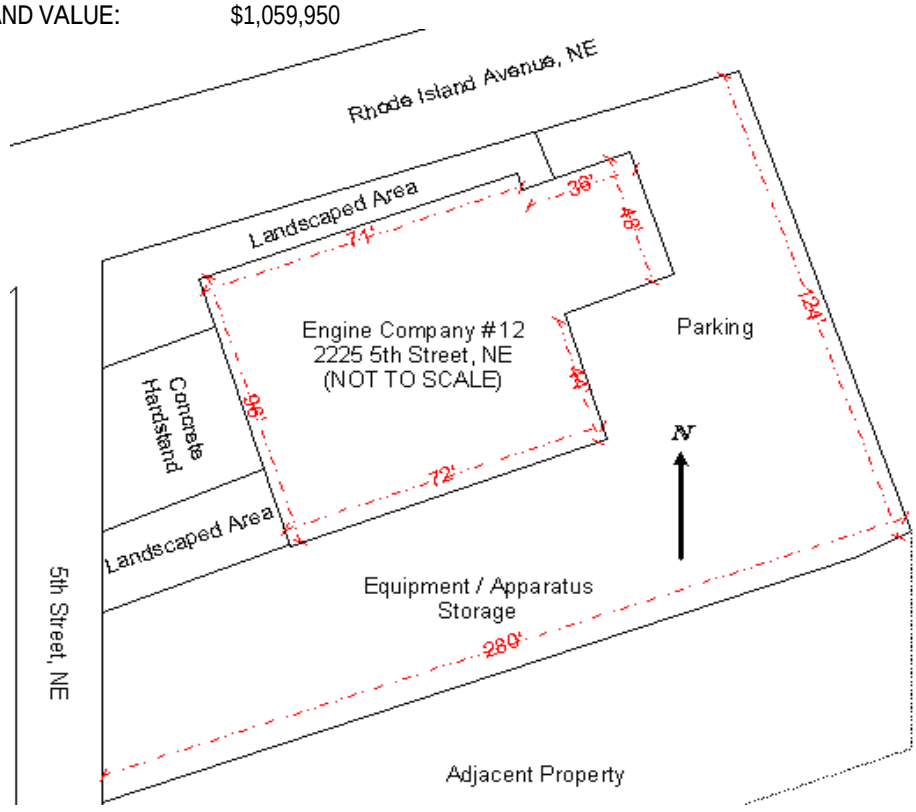
YEAR OF CONSTRUCTION: 1987

NUMBER OF PARKING SPACES: APPROXIMATELY 21 SPACES

OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY OCCUPIED ☐

ASSESSED BUILDING VALUE: $3,420,070

ASSESSED LAND VALUE: $1,059,950



FACILITY CONDITION INDEX SUMMARY

As part of this evaluation, Faithful+Gould was requested to calculate the Facility Condition Index ("FCI") of the Property. This was calculated for the continued fire station use scenario. The FCI is the ratio of accumulated Deferred Maintenance (DM) to the Current Replacement Value (CRV). The DM includes the total Capital Expenditure Forecast amount indicated in Appendix A and the Maintenance Expenditure Forecast amount indicated in Appendix B, less Environmental Analysis costs. The CRV is based on cost data provided by RS Means® at a value of $148 per gross square foot times the gross square footage of building floor area. The FCI of the constructed asset is calculated by dividing DM (maintenance and capital costs) by the CRV as indicated by the following formula:

Deferred Maintenance / Current Replacement Value = Facility Condition Index

The FCI range is from zero for a newly constructed asset, to one for a constructed asset with a DM value equal to its CRV. Acceptable ranges vary by "Asset Type', but as a general guideline the FCI scoring system is as detailed in Table FCI-1.

Table FCI-1 Facility Condition Index (FCI) Values

Numerical Value	Condition
> 0.75	Poor
0.40 - 0.75	Fair
0.0 - 0.39	Good

We have calculated a Current Replacement Value of **$2,355,124** (based on a value of $148 per gross square foot and a floor area of 15,913 gross square feet) and a **Deferred Maintenance value over the six-year study period of $228,077.** The Property is in **good condition**, indicative of its FCI ratio of **0.10** and this is generally a good reflection of the building's condition.

Capital Expenditure Forecast	$ 0
Maintenance Expenditure Forecast	$ 345,377
Subtotal	$ 345,377
Less Sustainability Costs (LEED/Energy) Analysis Expenditures	
Capital Expenditure Forecast	($0)
Maintenance Expenditure Forecast	($117,300)
Subtotal	($117,300)
Deferred Maintenance (DM)	$ 228,077

$228,077 DM / $2,355,124 CRV = 0.10 FCI

FACILITY CONDITION ASSESSMENT

A. SUBSTRUCTURE

A10 FOUNDATIONS

Description

In the absence of structural drawings, we have based our description of the foundation systems upon our visual observation (where possible) of the systems and our experience with similar structural systems. Based upon the sizing, type and anticipated loadings of the superstructure systems and our visual observation of geotechnical conditions, we anticipate that the superstructure of the building is founded on a series of individual and continuous strip footings of mild-steel reinforced cast-in-place concrete.

Condition

The foundation systems appeared to be in good condition with no evidence of overloading, subsidence or other visually indicative deterioration noted. Assuming the continued use of the building as a fire station and no change in the building's loading profile, we do not anticipate significant repairs or replacements of the foundation systems within the six-year study period.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

A20 BASEMENT CONSTRUCTION

The Property does not have a basement.

B. SHELL

B10 SUPERSTRUCTURE

Description

Concrete Strength

In the absence of detailed structural drawings, we were unable to determine the design strength of the concrete elements.

Floors

The ground floors are reinforced cast-in-place concrete slabs-on-grade, of a thickness such as 6" to 8", capable of supporting the heavy loads of the fire fighting equipment. The second floor is reinforced pre-cast concrete twin-tee sections with concrete topping.

Superstructure

The superstructure is a combination of reinforced pre-cast concrete columns, beams and twin-tee decking and reinforced cast-in-place concrete roof decks. Non-load-bearing 8" thick concrete masonry unit (CMU) walls are used to infill the structural frame at the building exterior and certain interior walls (see Photograph 29 in Appendix C). Columns are typically 20" square and spaced at 25' on center. The pre-cast concrete twin tees are 8' wide, with the integral joists approximately 4' on center and 30" deep.

The stairs to the second floor are steel-reinforced concrete, with painted metal pipe handrails.

Internal Walls & Ceilings

Interior walls are typically non-load-bearing and constructed of CMU and metal stud framed partitions. The ceilings (see Photograph 15 in Appendix C) are typically acoustical grid systems suspended from the structural system.

Exterior Walls

The exterior walls are non-load-bearing pre-cast concrete panels, anchored to CMU backup and the concrete superstructure.

Roof Structure

The roof structure is a combination of reinforced cast-in-place concrete and pre-cast concrete decks, approximately 4" to 6" thick, supported by the superstructure.

Condition

The respective superstructure systems appeared to be in good condition with no evidence of overloading or failure noted. We do not anticipate a requirement to complete significant repair, replacement or supplementing of the superstructure system during the six-year study period.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

B20 EXTERIOR CLOSURE

Description

Exterior Wall Systems

The building, rectangular in shape, was developed as two-stories originally and a single-story addition was added to its northeast side in 2001-2002 (see Photographs 2, 3 and 8 in Appendix C). The exterior wall system for the original building and its addition is unfinished pre-cast concrete panels on CMU and metal stud backup. The pre-cast concrete panels are 8' to 10' wide twin-tee and ribbed types, with painted, smooth-faced pre-cast concrete horizontal bands at the second floor and the roof line.

The exterior wall panels do not appear to be load-bearing, but are anchored to the concrete superstructure and the CMU backup. The assembly of the exterior walls on the interior side is likely to be gypsum wallboard on metal stud framing or furring, with batt insulation, attached to the CMU backup and façade panels.

Windows and Doors

The building contained a total of 23 windows, each a unit with fixed upper glazing and an operable hopper-type section with hand-operated latches at the bottom. The windows are aluminum framed, thermally glazed units sealed at the perimeter with variable thickness urethane-type sealant. The windows typically have exterior decorative metal grilles attached to the façade.

Table B20-1 Window Systems

TYPE	SIZE	QUANT.	LOCATION	FRAME	GLAZING	OPER.	OTHER
1	37" width x 71½" height	23	Each Façade; 18 Units at the 2nd Floor, 6 Units at the 1st Floor	Dark, Anodized Aluminum	Tinted, Insulated	Hopper, Lower Sash; Fixed Above	Aluminum-framed Storefront Glazing at Main Entrance

The main entrance, on the southwest façade facing 5th Street NE is a single 3'-0" by 7'-0", thermally glazed standard storefront door, with sidelights of fixed glazing in aluminum framing. The other doors are typically painted hollow-metal units in metal frames, with cylindrical exterior hardware and push-type panic interior hardware. Some doors contained lites.

The entrances to the apparatus bays have motorized metal bi-fold type doors with tinted glazing in the original building and metal sectional overhead doors in the addition. Interior doors are a combination of hollow-core and solid-core wood and hollow-metal doors in metal frames. At the first floor watch room, fixed wire-glass windows in metal frames are located adjacent to the room's door. Interior door hardware was a combination of cylindrical lock-sets and push-plates/pull bars. The exterior door frames were sealed along the perimeter with variable thickness urethane sealant. Table B20-2 provides a summary of the door systems.

Table B20-2 Exterior Door Systems

TYPE	SIZE	QUANTITY	LOCATION	MATERIAL	FRAME	OTHER
1	3' x 7' with Sidelights	1	Main Entrance, Southwest Façade Facing 5th Street NE	Tinted thermal Glazing in Anodized Aluminum Framing	Anodized Aluminum Storefront	
2	3' x 7'	4	Each Façade and Stairwell Door to the Roof	Painted Metal, Some with Lites	Painted Metal	
3	Pair 3' x 7'	1	Northeast Façade of Addition	Painted hollow metal	Painted hollow metal	
4	12' x 14' Bi-fold	4	Southwest and Northeast Facades	Painted Metal with Tinted Glazing	Metal	Apparatus Bay Doors; Motorized Openers
5	12' x 14' Sectional Overhead	2	Northeast Façade of Addition	Pre-finished Metal	Metal Track	Apparatus Bay Doors; Motorized Openers

Condition

Exterior Wall Systems

The exterior wall systems are generally in good condition. Items of repair include impact-damaged precast concrete panels at the first floor level of the southeast façade. Vehicles using the adjacent parking area have damaged the bottom corners of the panel projections, exposing reinforcement steel. Other items of repair include faded and peeling paint on the smooth-faced pre-cast concrete panels at the second floor and roof line, minor cracking in the pre-cast concrete panels along their bottom edges and dried and cracking sealant in the joints between panels. We recommended budgeting for near-term repairs to the damaged panels, repainting of the panels at the second floor and roof line and replacement of panel sealants.

Windows and Doors

Window systems are generally in good condition, with the perimeter sealants in fair condition (see Photograph 14 in Appendix C). The windows and exterior doors are the original installations, with minor seal damage noted at a limited number of the hopper window sashes (see Photograph 36 in Appendix C). The decorative metal window grilles, also of use for security reasons, are in good condition, but will require repainting during the study term. The grille on a first floor window on the southeast façade was missing and its replacement is

recommended. We have recommended budgeting for the near-term replacement of the perimeter sealants, as part of the building façade sealant replacement work, as well as routine maintenance adjustments to the window seals.

The exterior doors and frames appeared to be in generally good condition, but require near-term repairs to the hardware. The exit door from the addition's apparatus bay was taped off at the time of our assessment, with a broken closer and door latch; the stairwell's door to the roof also had a damaged closer, latch set and frame. Minor, localized surface damage was noted to the doors and frames, and surface preparation and repainting are recommended. As at the façade panels and window frames, the door frames' perimeter sealant was dried and cracking and we recommend its replacement.

The bi-fold apparatus bay doors appear to not fully close and seal, allowing wind and weather infiltration during winter months. The door operators appear to be original, require frequent repairs and are approaching the end of useful life. We recommend budgeting for the replacement of bi-fold door operators during the term of study, as well painting of the doors at the time of other façade and door painting.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend repairs be completed to the pre-cast concrete façade panels, at locations of vehicle impact damage and at minor locations of spalling or cracking in the panels. At the locations of vehicle damage, we recommend removal of damaged concrete, cleaning of the adjacent surfaces and reinforcement steel, installation of any necessary additional reinforcement and forming and pouring of replacement concrete.

   At locations of minor panel damage, patching with epoxy grout is recommended. Our opinion of the cost for this work is $4,805 ($34.32 per square foot) for concrete repairs. To prevent additional damage to the wall panels, we recommend installation of concrete-filled steel pipe bollards along the wall to prevent vehicle contact. Our opinion of the cost for this work is $2,400 ($600 each) for installation of bollards. Total cost for these repairs is $7,205.

2. We recommend repainting of the pre-cast concrete bands at the second floor and roof line. Our opinion of the cost for this work is $4,125 ($1.25 per square foot).

3. We recommend replacement of the sealants in the façade panel joints. Our opinion of the cost for this work is $36,720 ($13.60 per linear foot).

4. We recommend repairs to the exterior door hardware, replacing damaged closers, locksets and hinges. Our opinion of costs for this work is $2,000 ($500 each).

5. We recommend replacement of the bi-fold apparatus bay door operators. Our opinion of the cost for this work is $27,600 ($6,900 each).

6. We recommend painting the exterior doors and frames and the metal window grilles. Our opinion of costs for this work is $7,250 ($250 each).

7. We recommend replacement of the perimeter sealant at the door and window frames. Our opinion of the costs for this work is $10,500 ($13.60 per linear foot)

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

B30 ROOFING

Description

The building contains two low-slope roof areas, the main two-story building and the single-story addition. The main building's roofing is a multi-ply asphaltic-based built-up roofing (BUR) system, with a hot-mopped tar and graveled surface. Styrene-butadiene-styrene (SBS) modified bitumen cap sheet material is used at the parapet's base flashing, equipment curbs and around roof drains (see Photograph 11 in Appendix C). The addition's roofing is SBS modified bitumen material BUR, with granular surface (see Photograph 5 in Appendix C). Fire department personnel reported that the main roof system was replaced within the past five to six years, while the addition's roofing was installed approximately 10 years ago.

The roofing materials are installed over sloped roof decks and rigid tapered insulation to promote positive drainage. The main roof drains via sheet flow to five 10" to 12" diameter roof drains with interior leaders. The addition's roof drains via sheet flow to one 10" to 12" diameter roof drain. Overflow drainage is provided at the addition only by a through-wall scupper. Both roof areas are enclosed by low parapet walls that vary in height from 6" to 10" (see Photograph 32 in Appendix C). The parapet walls are extensions of the main exterior walls and are capped with metal cap flashing. The roofs' field membranes are turned up and over the parapet walls and covered by the cap flashing.

Overview of Roof Locations & Configuration

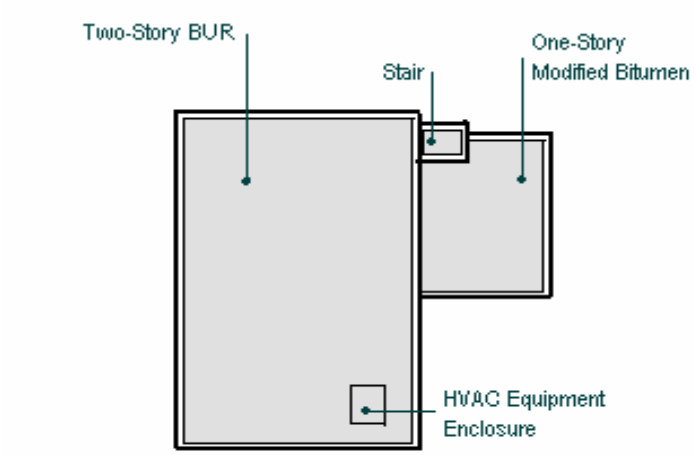


Table B30-1 provides a summary of the roof construction.

Table B30-1 Summary of Roof Construction

Roof Component	(Main) Low-Slope Roof	(Addition) Low-Slope Roof
Age	Approximately 6 years old	Approximately 10 years old
Roof Area (total / approx. square footage)	6,900 SF	1,710 SF
Application/ Membrane	Multi-Ply BUR	SBS Modified Bitumen BUR
Manufacturer / Model	Unknown	Unknown
Surface	Gravel in Hot-Mopped Tar	Granular Surfaced
Deck Type	Concrete	Concrete
Insulation	Tapered Rigid Insulation	Tapered Rigid Insulation
Cover Board	None	None
Drainage	5 - 10" Diameter Roof Drains	1- 10" Diameter Roof Drain
Overflow Scuppers	None	1 Through-Wall Scupper
Base Flashings	Extension of Field Plies and SBS Modified Bitumen	SBS Modified Bitumen
Cap Flashings	Pre-finished Metal	Pre-finished Metal
Perimeter Enclosure	6"-10" Exterior Wall Extensions	6"-8" Exterior Wall Extensions
Warranty (Manufacturer)	Unknown	Unknown
Warranty (Contractor)	Unknown	Unknown

Condition

The roof systems appear to be in good condition (see Photograph 4 in Appendix C). However, the on-site personnel reported that patching was recently required around the roof drain in the HVAC enclosure at the southeast corner of the main building roof. The second floor storage room below this roof drain had stained and damaged ceiling tile, indicating that additional patching may be required. The parapet and equipment curb flashing and the parapet's metal cap appeared to be in good condition. We recommend that additional roofing repairs be completed at the main roof's southeastern roof drain and that regular roof maintenance be provided to extend the life of the roofs.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend that roofing field membrane and flashing repairs be completed in the area of active roof leaking at the main roof's southeastern drain. Our opinion of the cost for this work is $500 ($5 per square foot).

Priority 3 (2011 – 2014)

2. We recommend annual inspection and maintenance to the roofing systems. Our opinion of the cost for this work is $861 ($0.10 per square foot).

Priority 4 (2015)

3. We recommend annual inspection and maintenance to the roofing systems. Our opinion of the cost for this work is $861 ($0.10 per square foot).

C. INTERIORS

C10 INTERIOR CONSTRUCTION

The first floor contains the emergency vehicle apparatus bays (see Photographs 6 and 7 in Appendix C) and adjacent support services, including staff restrooms, break rooms, community room with kitchen (see Photographs 16 and 17 in Appendix C), equipment storage, an equipment/vehicle maintenance bay and workshop, watch room, main electrical room and a hazardous materials storage room. The second floor contains a credit union office for department employees, mechanical and electrical equipment rooms, open staff sleeping quarters, private officers' sleeping quarters, men's and women's locker rooms (see Photograph 13 in Appendix C), restrooms (see Photographs 11 and 12 in Appendix C) and fitness center.

C20 STAIRS

The one stairwell that provided for access to the second floor, located in the northeastern corner of the main building, is constructed of reinforced concrete, with treads with steel nosings, concrete landings and painted metal pipe railings. The stairs provides access to both floor and the roof and has walls of painted CMU and a ceiling of painted concrete.

C30 INTERIOR FINISHES

Description

Interior finishes include ceilings of painted and unfinished, exposed structural concrete, painted gypsum wallboard, and suspended acoustical tile in exposed grids. Flooring included unfinished, as well as sealed, concrete, vinyl composition tile (VCT), ceramic and quarry tile in wet areas, such as restrooms and shower rooms. Wall finishes included glazed and painted CMU and painted gypsum wallboard. Many wet areas contained 4 ¼" x 4 ¼" glazed ceramic tile wainscots (of varying heights), with painted gypsum wallboard above. Interior doors were generally painted, flush or glazed steel units in steel frames.

Condition

Interior construction is in good condition and interior finishes are generally in fair condition, due to aging of the finishes and a lack of routine maintenance and repairs. Deficiencies observed included ten stained, as well as missing, acoustical ceiling tiles in the second floor sleeping quarters, approximately 15 cracked VCT and various cracked ceramic floor tile.

Several fire-rated doors were observed to be propped open, have damaged closers, hinges or latches, including the stairwell doors at each floor, the second floor mechanical room door and the roof access door. The building requires the normal repair and restoration of a building of its age and we recommend repairs / replacements to all damaged surfaces mentioned above. In addition, we recommend painting of walls, doors and frames during the study period.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend replacement of stained, damaged or missing acoustic ceiling tile. Our opinion of the cost for this work is $489 ($6.11 per square foot).

2. We recommend replacement of damaged VCT and ceramic tile. Our opinion of the cost for this work is $136 ($67.75 per square yard) for VCT and $435 ($17.41 per square foot) for ceramic tile, for a total of $571.

3. We recommend repairs to interior doors, including installing a door at the second floor mechanical room ($979), replacing damaged hardware at 6 doors ($4,338 at $723 each), and adjusting closers and latch-sets at 4 fire-rated doors to allow proper closing and latching ($600 at $150 each), for a total of 5,917.

Priority 3 (2011 – 2014)

4. We recommend painting of the CMU and gypsum board walls, the gypsum board ceilings and the interior doors and frames in 2011. Our opinion of the cost for this work is $23,563 ($1.25 per square foot).

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

D. SERVICES

D10 CONVEYING

The building does not contain conveyance systems.

D20 PLUMBING

The following information was obtained through our visual observations of the building systems. The plumbing systems include the domestic cold and hot water systems, sanitary waste and vent systems, storm water collection system and natural gas system.

Domestic Water Systems

Description

Domestic Cold Water

Domestic cold water enters the building at the first floor. The incoming line is ductile iron pipe, but copper piping is used for throughout domestic water distribution system. There is no pressure booster system, with the water service supplied directly from the street main's pressure. Taps are made to the water line downstream of the meter and routed to plumbing fixtures and equipment in the various areas of the building.

Domestic Hot Water

Domestic hot water is generated by two electric water heaters (see Photograph 18 and 19 in Appendix C). Both water heaters are manufactured by Bradford White, approximately 120-gallon capacity and from five to ten years old. One water heater is in a first floor housekeeping storage room and the other is in the second floor mechanical room.

Cold water makeup for the how water system is from the domestic water system. Hot water supply pressure into the building is supplied directly from the street main pressure.

Domestic Water Piping

Observed domestic water piping is primarily copper and some of the domestic hot water piping is insulated.

Condition

The domestic water systems appeared to be in good condition, which was confirmed by the on-site personnel. No major problems were observed that could be attributed to age or deferred maintenance. Based upon our experience with similar buildings in the District of Columbia, the incoming water line should be adequate to serve for the needs of the building.

In order to address plumbing repair needs proactively, we recommend budgeting for an annual domestic water system preventive maintenance program.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend budgeting for an allowance of $500 per year for as-needed repairs and replacements of domestic water system equipment commencing in 2010.

Priority 3 (2011 – 2014)

2. We recommend budgeting for an allowance of $500 per year for as-needed repairs and replacements.

Priority 4 (2015)

3. We recommend budgeting for an allowance of $500 per year for as-needed repairs and replacements.

Sanitary Waste and Vent Systems

Description

Sanitary waste is collected from multiple riser stacks throughout the building and tied into a single riser in the first floor electrical room. This riser drains via gravity into a horizontal main and out of the building to the municipal main under the public roadway.

Sanitary waste and vent piping materials vary, but most lines are cast iron piping, with some polyvinyl chloride (PVC) plastic used. No sump or ejection pumps are required in the building.

Condition

The sanitary waste and venting systems appeared to be in good condition and no system problems were reported by on site staff.

In order to address plumbing repair needs proactively, we recommend budgeting for an annual sanitary waste and venting system preventive maintenance program.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

4. We recommend budgeting for an allowance of $500 per year for as-needed repairs and replacements of sanitary waste and vent system piping commencing in 2010.

Priority 3 (2011 – 2014)

5. We recommend budgeting for an allowance of $500 per year for as-needed repairs and replacements of sanitary waste and vent piping.

Priority 4 (2015)

6. We recommend budgeting for an allowance of $500 per year for as-needed repairs and replacements of sanitary waste and vent piping.

Storm Water Systems

Description

The building is constructed with low-slope roofs, draining via roof drains to vertical risers and out of the building through gravity lines to the municipal stormwater system. The observed riser piping was 6" to 8" diameter cast iron, with PVC piping used in the northeastern building addition. An overflow scupper is provided through the parapet wall in the addition, but scupper or overflow drains are not provided on the main building's roof

Condition

No problems with the storm water systems were observed and the on-site personnel reported that the drain and piping system was in good condition.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Natural Gas Systems

Description

Underground natural gas service is provided by Washington Gas to the Property. The pressure regulator and gas meter are located at northwest corner of the main building, along Rhode Island Avenue NE (see Photograph 35 in Appendix C). Gas service is routed by black steel piping to the overhead infrared heaters in the apparatus bays.

Condition

No problems were noted related to the natural gas distribution equipment or piping system.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

D30 HVAC

The heating, ventilation and air conditioning systems include central and local heating and air conditioning systems, air distribution systems, and exhaust and ventilation systems.

Air Distribution Systems with Heating and Cooling

Description

Most areas of the building, particularly the second floor, are heated and cooled by individual electric package terminal air conditioning (PTAC) units installed through the exterior walls. There are a total of 17 PTAC units, manufactured by Trane, with heating capacities of 11,900 British Thermal Units per Hour (BTU/H) and cooling capacities of 9,300 BTU/H (3/4-ton). The units are installed through the walls below windows and have prefinished metal grilles at the exterior wall. Each PTAC unit is individually controlled by hand-operated switches on the unit.

Heating in the first floor apparatus bays is provided by six infra-red radiant gas heaters mounted above the large bay entrance doors on the southwest and northeast sides of the floor. The units, manufactured by Space Ray, are suspended the width of the doors, are vented through the roof and are controlled by local thermostats. Although specific unit capacity data could not be obtained due to their mounting heights, manufacturer's data indicates the units each have heating capacities of 30,000 to 50,000 BTU/H.

Other heating equipment in the apparatus bays included electric fan-coil unit heaters mounted overhead above the bay entrance doors in the main building. A cabinet-type electric fan-coil unit heater supplies supplemental heating in the stairwell.

Supplemental cooling is provided on the second floor by split system equipment manufactured by Carrier. An air handling unit is located in the second floor mechanical room and a condensing unit is located on the roof. With a cooling capacity of 10-tons, the unit, according to the manufacturer's data, provides cooling only (see Photographs 25 and 26 in Appendix C). The unit's tempered air is provided by the air handling unit's supply fan through metal ductwork to ceiling diffusers.

A second air handling unit, manufactured by McQuay, is suspended overhead in the apparatus bays and appears to be a heating-only unit for the large service vehicle area.

Condition

The PTAC units are original equipment, installed in 1987, and fire department personnel reported that the cooling they provide is insufficient. It was reported that approximately 70% of the PTAC units are not operational due to damaged control switches. We recommend replacing the inoperable PTAC units early in the term of study.

The infra-red radiant heaters appear to have been recently installed and are considered to be in good condition. The adjacent electric fan-coil units in the apparatus bays appear to be original equipment that is no longer used, having been superseded by the infra-red radiant heaters.

The split system equipment was installed in 2008 is in good condition. However, the equipment's 10-tons of cooling capacity was intended to supplement the PTAC units and, with so many inoperable PTAC units, is not sufficient alone to cool the second floor.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend budgeting for the replacement of 13 inoperable or poorly operating PTAC units. Our opinion of cost for this work is $19,500 ($1,500 per unit), in 2010.

Priority 3 (2011 – 2014)

2. We recommend budgeting for the replacement of the 4 remaining original PTAC units. Our opinion of cost for this work is $6,000 ($1,500 per unit), in 2011.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Ventilation and Exhaust Systems

Description

Outside air for ventilation of the occupied floors is supplied through operable windows, the PTAC units and the split system equipment.

The building exhaust systems consist of five rooftop exhaust fans serving the first and second floor restrooms and the second floor locker rooms. A sidewall exhaust fan serves the first floor kitchen's cooking hood.

An exhaust system is provided in the main vehicle room specifically to remove vehicle exhaust fumes. The ceiling-mounted vehicular exhaust extraction system includes mechanically-attached, ceiling-mounted steel tracks with suspended flexible 6" diameter ducts that can be connected directly onto the exhaust system of the vehicles while operating inside the building. The system included an exhaust fan, mounted on the exterior wall at the southeast side of the building, manufactured by Cincinnati Fan Company.

Condition

The ventilation systems provided are adequately sized to comply with requirements for "natural ventilation". The exhaust systems appear to be in good to fair condition, with the exception of the kitchen fan. The on-site personnel reported the fan was not operable and we recommend its replacement. The vehicle exhaust system appears to have been installed in the past five to ten years and is in good condition.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

3. We recommend replacement of the kitchen's sidewall cooking hood exhaust fan. Our opinion of the cost for this work is $2,752.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Temperature Control Systems

Description

Separate controls are located on each of the PTAC units, controlling heating and cooling modes. Control for the split cooling system equipment consists of a local electric thermostat, mercury non-programmable type, on the second floor. Controls for the infra-red radiant heaters are located near the units on the first floor.

Condition

The control systems are believed to be functional, but provide a minimum in flexibility to adapt systems operations to changing conditions.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

D40 FIRE PROTECTION

Fire and life safety elements observed included structural fire protection, fire-rated means of egress, handheld fire extinguishers and minimal fire alarm signaling devices.

Structural Fire Protection

The structure consisted of reinforced CIP and pre-cast concrete decks, columns and beams. The building construction resembles Construction Type I, per IBC Table 601. With this type of construction and structural system, supplemental protection, such as spray-applied fireproofing or fire-rated gypsum wallboard enclosures, is not required.

Means of Egress

Description

The first floor of the building is provided with exiting through four doors, with secondary exiting available, when open, through the large vehicle doors. Exit doors typically have push panic-type hardware and clear opening widths of 34" per leaf.

The second floor exits through one stairwell at the northwest corner of the floor. The stair, access directly from the second floor sleeping quarters, is enclosed with two-hour fire-rated CMU walls, has 90-minute fire-rated doors and exits directly to the exterior at the northwest side of the building along Rhode Island Avenue NE. Doors at offices and other spaces appear to have ¾-hour fire-rated doors.

Firefighters have use of poles in fire-rated enclosures for immediate access into the apparatus bays from the second floor sleeping quarters.

The building contains illuminated exit signs with battery backup power and emergency exiting lights, both assumed to be connected to a diesel-fueled emergency power generator.

Condition

The means of egress appeared to be generally compliant with the building codes in effect at the time of construction. However, the exterior egress door in the stairwell is partially obstructed by equipment storage lockers. The stairwell's entrance doors on each floor were also propped open at the time of our assessment, limiting the fire rating of the stairwell. We recommend that the stairwell's doors be provided with full, unobstructed access, that they remain closed as intended and that their hardware provide proper closing and latching. The single means of egress from the second floor does not comply with current life safety codes, but is considered to be acceptable as "grandfathered" under the building's original construction code.

The exit signs were of the older, dimly illuminated type (see Photograph 24 in Appendix C). The egress lighting was not tested at the time of our assessment, but appeared to be adequately located. On-site fire department personnel reported that the exit signs and emergency lighting are not fully operational. We recommend that the exit signs and emergency lighting be repaired and/or replaced as necessary, with additional signs and lighting fixtures provided as needed for adequate life safety.

We noted that some of the fire-rated doors do not fully close and latch properly, due to normal wear and tear that has damaged closers and lockset latches. Most doors and frames are in fair condition because of the hardware, and the misalignment of the doors and frames, as well as marks, dents and damaged paint. We recommend repairing the door hardware and painting the doors and frames, as indicated in Section C10, Interior Construction.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend budgeting for the replacement of the exit signs with LED-type illuminated exit signs throughout the building. Our opinion of cost for this work is $2,436 ($203 each).

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Fire Suppression Systems

Description

The building does not have an automatic fire sprinkler system or standpipes with hose valve connections. Handheld fire extinguishers are provided on the emergency vehicles and at a limited number of locations in the facility.

Condition

On-site fire department personnel indicated that the number of fire extinguishers provided was limited and that they were not routinely serviced. The service tag on the fire extinguisher observed in the main electrical room, used to prop open the door, indicated the date of last service was June 2007. We recommend the installation of additional fire extinguishers and budgeting for their annual testing and servicing of the extinguishers to improve life safety within the Property.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

2. We recommend budgeting for the installation of 10 fire extinguishers throughout the building. Our opinion of cost for this work is $750 ($75 each).

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

3. We recommend an annual budget allowance of $500 for inspection and servicing of fire extinguishers, commencing in 2011.

Priority 4 (2015)

4. We recommend an annual budget allowance of $500 for inspection and servicing of fire extinguishers.

Fire Detection and Alarm Systems

Description

The building is protected by a hard-wired fire alarm system, with a Simplex main control panel located in the electrical room, manual pull stations at the exterior egress doors and stairwell doors, interior and an exterior alarm bells and smoke detectors. There is no external connection or supervision of the fire control panel, but it a local alarming system only.

Condition

The fire alarm system, installed as part of original construction, appeared to be turned off and not operational at the time of our assessment. Because of the age of the system and its current nonfunctional condition, we recommend the replacement of the system, installing a local, zoned fire alarm system with manual pull stations, horn/strobe alarm devices and smoke detectors throughout the building.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

5. We recommend replacement of the fire alarm system, installing a local, zoned fire alarm system with manual pull stations, horn/strobe alarm devices and smoke detectors throughout the building. Our opinion of the cost for the system is $23,870 ($1.50 per square foot).

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

D50 ELECTRICAL

The electrical systems include the service entrance equipment, panelboards, safety switches, motor controls, lighting fixtures, and emergency power generation.

Electrical Service and Distribution Equipment

Description

Electrical Service Equipment

The building receives electrical service underground from a pad-mounted transformer supplied by Potomac Electric Power Company (PEPCO) located in the rear parking area, at the site's northern corner (see Photograph 20 in Appendix C). Service characteristics are 1,600-amps, 120/208-volt, 3-phase, 4-wire. Underground ducts are routed from the utility company's transformer to a current transformer (CT) cabinet (see Photograph 22 in Appendix C) and the two-section main switchboard in the first floor main electrical room.

Numerous additional distribution and branch electrical panelboards and disconnect switches are located in the main electrical room, with a limited number of panelboards also located throughout the building.

Power Distribution

Voltages

Large motors in the building (e.g. those serving the HVAC equipment, water heaters, and fans) are supplied at 480/277-volts, 3-phase. Light fixtures, general purpose receptacles, and small appliance and equipment loads are served at 208/120-volts. A 300-kVA transformer is located in the main electrical room.

Wire and Conduit

Electrical distribution is typically accomplished using wiring in conduit. Observed wiring consisted of copper with thermoplastic insulation (see Photograph 23 in Appendix C).

Conduit types varied in the building based on area and usage, with rigid metal conduit is used in areas subject to constant moisture or physical damage and electrical metallic tubing (EMT) used in interior spaces.

Panelboards

Two types of panelboards are used in the building: a high amperage distribution panel, rated at 400-amps, located in the main electrical room, and a lower amperage type of panelboard, rated at 200- and 100-amps, located primarily in the main electrical room. Panels utilize circuit breakers for overcurrent and short circuit protection of circuits.

Safety Switches

Fusible and non-fused type safety switches are also installed near equipment such as pumps and fans and serve as the required local disconnecting means for the equipment.

Motor Control

The motor control for pumps and fans consists of individual motor starters located near the associated equipment. The typical control unit consists of a magnetic contactor, overload relays, and associated control wiring.

Automatic Transfer Switch

An automatic transfer switch switches power to an automatic control scheme. Typically, the switch has a control interlock with the normal utility power feed. The interlock controls the contactor for the switch and if the main incoming power is interrupted, the interlock will engage the contactor and cause the switch to transfer incoming power from primary utility power to emergency generator power. The typical control unit, located in the main electrical room and manufactured by Generac, consists of a magnetic contactor, overload relays, and associated control wiring.

Equipment Manufacturers

There is a variety of electrical equipment manufacturers represented in the building, including General Electric and Cutler Hammer.

Condition

The electrical distribution system is considered to be in good to fair condition. Electrical equipment of the type installed in this building is generally considered to have a service life of 30-years. Switches, panelboards, motor starters, and wiring are often serviceable for 20 years or more beyond this time if properly maintained, and not subjected to repeated overload or short circuit conditions. The Property's equipment is primarily original installation and is 22 years old and there is no indication that the equipment has received proper maintenance.

Several panelboards were missing covers and wiring was exposed (see Photograph 23 in Appendix C) and many panelboard lacked service directories. In the main electrical room, maintenance material and emergency service equipment was stored in front of the panelboards, the main switchboards and transformer, in violation of the posted warning signs to maintain 36" of clearance in front of equipment.

We recommend providing the required clearances in front of the electrical equipment, relocating the material and equipment stored in the main electrical room. We recommend that all panelboard covers be properly installed and service directories be completed. We also recommend that the electrical equipment receive preventive maintenance, consisting of cleaning the interiors of all enclosures, and infrared scanning of connections, fuses, and breakers in switches, panelboards, and motor starters. This maintenance service should begin in 2010 and be repeated no more than every 3 years thereafter. Any items identified as abnormal during the infrared scanning process should be corrected at that time.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend that the electrical equipment receive preventive maintenance as described above, beginning in 2010 and repeating no more than every 3 years thereafter. Any items identified as abnormal during the infrared scans should be corrected at the time. The estimated cost for this work is $2,387 ($0.15 per square foot) per occurrence.

Priority 3 (2011 – 2014)

2. We recommend that the electrical equipment receive preventive maintenance as described above, in 2012 and repeating no more than every 3 years thereafter. Any items identified as abnormal during the infrared scans should be corrected at the time. The estimated cost for this work is $2,387 ($0.15 per square foot) per occurrence.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Emergency Power Generation and Distribution Equipment

Description

Emergency power is supplied to a Generac automatic transfer switch (ATS) in the main electrical room, rated at 120/208-volts. A diesel-fueled generator, located outside at the northwest side of the building (see Photograph 21 in Appendix C), was manufactured by Generac (see Photograph 21 in Appendix C). The generator has a rating of 30kW / 38kVA and was manufactured in 2002. The generator is fueled from an above-ground tank located underneath the generator.

Emergency power distribution within the building, assumed to be provided to the fire alarm system, emergency lighting and F&EMS communications equipment, is similar in configuration to that for normal power. Wiring is run in conduit, and cables are assumed to consist of copper conductors with rubber or thermoplastic insulation. Conduit consisted of a combination of rigid metal conduits and electrical metallic tubing (EMT).

Condition

The generator is in good condition, and appears to be operated on a routine basis for its proper maintenance.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Lighting Systems

Description

Fluorescent lighting is typically used in the building, including wall-mounted 4' long single and double-lamped fixtures, ceiling-recess 2' by 4' fixtures and ceiling surface-mounted compact fluorescent fixtures.

Incandescent lighting is used in limited areas including small storage rooms. It appears that egress lighting, located in the stairwell and common areas, is powered by the emergency power system. Lighting control is via local switching in the respective rooms.

Condition

The lighting systems appeared to be in fair to poor condition, due to the age of the fixtures and limited maintenance. Many fixtures have discolored, stained, or missing lenses. Within the stairwell, six of the wall-mounted fixtures were damaged or missing lamps. Incandescent lamps in many equipment rooms and other service areas were inoperable or had missing or failed lamps, leaving them with insufficient or no illumination. We recommend budgeting for replacement of lighting fixtures in 2010.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

3. We recommend budgeting for the replacement of damaged or failed lighting fixtures. Our opinion of the cost for this work is $5,375 ($215 each).

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Communications and Data Systems

Description

Telephone and data services enter the building underground on the first floor in the main electrical room. Cabling and equipment within the building is maintained by the department staff or contractors.

Condition

The data and telephone infrastructure appeared to be in fair condition and access was obstructed by stored material and equipment. Significant repair or replacement is not expected within the six-year study period.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

D60 SAFETY, SECURITY & ACCESS CONTROL

Description

The Property was not provided with an intrusion detection system (IDS) or other monitored security or access control system. However, the exterior doors contain keyed or numbered-combination access control locksets. Other security measures include metal grilles placed over the windows.

Condition

The security and access control systems are in good condition.

Blast Shrapnel Protection

The windows were provided with limited blast shrapnel protection (see Photograph 1 in Appendix C) by the security grilles, but the glazing is typical thermal pane material and does not provide blast shrapnel protection.

Safety / Security Review

In addition to observation of the safety, security and access control systems, we completed a cursory level safety and security review. The purpose of the review was to determine and document hazards and required improvement in all areas of the building and surrounding site.

The rear of the Property perimeter is fully enclosed by precast concrete panel walls, approximately 8' in height, and rolling metal vehicle entry gates. The walls limit access to the entry gates, but the entry gates are no longer operable and remain open at all times. The lower level windows are provided with steel security grating and the exterior doors are hollow metal in steel frames. Based upon the installed systems, building design, and the fact that the building is typically occupied, additional access control, intrusion detection and/or other security systems are not considered necessary for enhanced security.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

E. EQUIPMENT & FURNISHINGS

E10 EQUIPMENT

Description

Equipment provided at the Property was included a system to manage and control Fire and EMS emergency resources, standard office equipment (computers, printers, copiers), fitness equipment, commercial kitchen equipment (gas range/oven with hood, refrigerator, dishwasher, stainless steel counter and shelving) and commercial and residential type laundry equipment (washers and dryers).

Condition

The components of the system and other equipment appeared to be in fair condition.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

E20 FURNISHINGS

Description

Furnishings provided at the Property were included office furniture (desks, chairs, filing cabinets, tables) and sleeping quarters furniture (see Photograph 10 in Appendix C) (beds, dressers, lamps, tables and chairs).

Condition

Furnishings at the Property were in fair condition, but significant replacements should not be expected during the term of study.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

No required maintenance expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

F. SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION

None.

G. SITE FEATURES

G10 SITE SYSTEMS

Site systems include concrete-paved parking areas (see Photograph 33 in Appendix C), curbs, and sidewalks, pre-cast concrete perimeter walls with metal gates, landscaping, storm drainage systems, site lighting, benches and a flag pole.

Description

The Property faces 5th Street NE, with its rear parking area accessed from Rhode Island Avenue NE at the northwest side of the site. Fire truck access is via the concrete-paved driveway from 5th Street, directly to the three apparatus bay doors (see Photograph 31 in Appendix C). Along the northeast boundary of the site, there is a concrete-paved visitor's parking area, accessed from 5th Street NE (see Photograph 32 in Appendix C). Access from this visitor's parking area into the rear parking area is provided by swinging metal gates, typically locked.

The rear parking area, located at the northeast side of the site, is concrete-paved and enclosed by a pre-cast concrete wall. The rear parking area is used for emergency vehicle access to the two-bay addition and for staff parking. The wall enclosed parking area is accessed from Rhode Island Avenue NE (see Photograph 30 in Appendix C), with a two-section, rolling steel gate (see Photograph 34 in Appendix C), each section 7' in height and 30'in length.

Concrete paved sidewalks, typically 4' wide, lead to the building entrance and are located along the public streets. Pre-cast concrete wheelstops are located in portions of the parking areas. Concrete curbing, typically 6" in height, is provided at the perimeter of the parking area and the driveway to the apparatus bays. Table G10 summarizes the approximate area of the asphalt and concrete site features.

Table G10 Asphalt & Concrete Site Features

Concrete Pavement (s.y.) [1]	No. Parking Stalls (inc. ADA) [2]	Area of Concrete Sidewalks (s.f.) [3]	Length of Pre-cast Concrete Walls (l.f.) [4]
2,440	Parking stall striping is not provided; space for approximately 24 stalls is available; no ADA spaces designated	300	520

1. s.y. indicates square yards
2. ADA indicates that parking stalls are marked and signed in general accordance with the intent of the 1991 Americans with Disability Acts Accessibility Guidelines (ADAAG) – No designated accessible spaces are marked.
3. s.f. indicates square feet
4. l.f. indicates linear feet

The 5th Street NE side of the site is landscaped with lawn areas and mature trees, with mature street trees along Rhode Island Avenue NE.

Wood and steel benches are located at the front of the building, with a 30' aluminum flagpole near the main entrance.

Exterior building illumination is provided by approximately 12 building mounted incandescent and HID fixtures.

Storm water drainage is to pavement inlets in the rear parking area and to gutter catch basins along the public streets.

Condition

The concrete pavement is in good to fair condition, with several sections recently replaced in the rear parking area. However, remaining areas of parking area and driveway pavement that require repair include locations of exposed slab reinforcement steel and open cracking.

The concrete sidewalks are in good condition, with only minor areas of isolated surface cracking.

The rolling steel gates at the Rhode Island Avenue NE vehicle entrance are in poor condition, with damaged hardware that prevent their closing, peeling paint and rusting metal surfaces. We recommend near term replacement of the gates' hardware and painting of all metal surfaces.

The storm water system is reportedly in good condition. Exterior lighting appeared to be in good condition and is reportedly fully operational.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend selective repairs to concrete pavement, totaling $1,980. These repairs include patching spalling concrete surfaces and exposed welded-wire-fabric reinforcement in the northern corner of the parking area near the pad-mounted electrical transformer at $1,680 ($15 per square foot) and open slab cracking in the entrance driveway from Rhode Island Avenue NE at $300 ($10 per lineal foot).

2. We recommend repairs to the rolling gates at the entrance driveway from Rhode Island Avenue NE. totaling $2,419. These repairs include replacement of the gate hardware at $848 ($424 each) and preparing and painting the steel gates at $1995 ($2.10 per lineal foot).

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

H. ACCESSIBILITY ISSUES

H10 Accessibility

Introduction

As a publicly accessible facility, access to and within the building for disabled building users will be governed (where applicable) by the 1991 Americans with Disability Act (ADA) Accessibility Guidelines. As the building in its present condition likely received a Certificate of Occupancy prior to the above mentioned act coming into effect, any continued occupancy of the current building would not be subject to the guidelines of the ADA.

Title I deals with employment discrimination, and requires that employers not discriminate against a disabled person in hiring or employment. This can impact the configuration and features of buildings and those employers are expected to make "reasonable accommodation", including making facilities readily accessible to disabled employees.

Title III requires that public accommodation provide goods and services to disabled patrons on an equal basis with the non-disabled patrons. This title is the part of the Act with perhaps the greatest impact on buildings, which provide public accommodations.

The ADA has provided a benchmark for measuring accessibility, primarily orientated towards new construction. It also provides guidance for modification of existing facilities to eliminate barriers to access. This benchmark is the ADA Accessibility Guidelines (ADAAG). The ADAAG was written by the Architectural and Transportation Barriers Compliance Board, and first issued in final form in July 1991. The stated purpose of the guidelines is to ensure that newly constructed facilities and altered portions of existing facilities covered by the ADA are readily accessible to disabled persons.

This report has been based upon the ADAAG issued in July 1991. Discussion has been made by the Architectural and Transportation Barriers Compliance Board for modification to the presently enforceable ADAAG. The details and enforcement date of these modifications have yet to be released. In light of this information, we recommend that prior to conducting any improvement, advice is sought from legal counsel and current guidelines be adhered to.

Regulatory implementation of the ADA includes the following priorities for barrier removal in existing facilities:

- **Accessible Entrances.** Providing access from public sidewalks, parking or public transportation that enables disabled individuals to enter the facility.

- **Access to Goods and Services.** Providing access to areas where goods and services are made available to the public.

- **Usability of Restrooms.** Providing access to restroom facilities.

- **Removal of Remaining Barriers.** Providing access to the goods, services, facilities, privileges, advantages, or accommodations.

Applicability

The ADA in its purist form relates only to facilities occupied or significantly altered after March 13, 1991. For facilities with Certificates of Occupancy issued prior to March 13, 1991 and not significantly altered after this date, the ADA is seen as a "good practice guide" with a requirement to complete accessibility upgrades typically made by civil suit and employee / user request.

The building received its initial Certificate of Occupancy prior to the March 13, 1991 implementation of the ADA and has not been subject to major renovation since this date. As a result, under the current fire station use, the building enjoys a grandfathered code status and is not required to complete accessibility upgrades. However, we have recommended that allowances be budgeted for correction of ADA violations to make this municipal facility fully accessible.

Accessibility Considerations

Accessible Entrances

The first consideration of the ADAAG relates to measures that will enable individuals with disabilities to physically approach and enter a place of public accommodation. The priority of "getting through the door" recognizes that providing actual physical access to a facility from public sidewalks, public transportation, or parking, is generally preferable to any alternative arrangement in terms of both business efficiency and the dignity of individuals with disabilities. In general terms this can mean exterior access to the building.

Persons traveling to the building by public transportation, specifically bus, will arrive at stops located near the Property along Rhode Island Avenue NE. Access from the bus stops to the site is by sidewalks along the public streets. Based upon our review, access to the site is ADA compliant.

Route of Travel

Disabled persons wishing to access the site and building are able to gain suitable by travel along the public sidewalks and the main entry drive or the visitor parking area at the south side of the site. A separate sidewalk connecting the public roadway's sidewalk with the building entrance is not provided. However, the main drive and the visitor parking area provides access to a sidewalk leading to the main pedestrian entrance door at the east side of the building.

Accessible Parking

Parking spaces are not marked within the parking areas and no designated ADA accessible parking space is provided. An accessible parking space should be located as close as possible to an ADA compliant entrance to the building. We recommend budgeting for application of pavement striping and marking and installation of an ADA compliant parking sign in the visitor parking area.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend striping of the pavement in the visitor parking area to provide a designated parking space, with pavement markings and a posted sign. Our opinion of cost for the work is $250. The cost includes parking stall striping, handicap accessible pavement markings, and a posted sign.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Accessible Drop-Off and Pick-Up Areas

An accessible drop-off and pick-up area is not provided.

Access to Goods & Services

The second consideration relates to measures that will enable individuals with disabilities to access areas within the Property that provides goods and services.

Accessible Routes and Amenities

Horizontal and Vertical Circulation

The building is two-stories and does not contain an elevator or platform lift. Once within the building, a disabled individual is provided with level and generally unrestricted access to the first floor only. The second floor contains only living quarters for fire department personnel and, therefore, access by the disabled is not considered to be required.

The handrails in the interior stairs do not comply with ADA requirements for a continuous, uninterrupted handrail along the interior of the steps and extensions at the top and bottom risers. We recommend modifying the handrails in the stairwell to comply with ADA requirements.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

2. We recommend budgeting $1,080 ($20 per lineal foot) for the modifications of interior handrails in the stairway, making the interior handrails continuous and extending the wall railings beyond the top and bottom risers.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Door Widths and Signage

Section 4.1 (Minimum Requirements) of the ADAAG states that when accessible entrances are not all accessible, then the inaccessible entrances shall have directional signage to indicate the route to the nearest accessible entrance. The main building entrance is considered accessible. The interior doorways appear to comply with ADA guidelines in terms of size, location, door opening pressure. However, the doors do not have proper lever-type hardware.

The ADAAG requires that signs that identify permanent rooms and spaces, such as those identifying restrooms and exits or providing classroom numbers, must have Braille and raised letters or numbers, so that they may be read visually or tactilely. The signs must also meet specific requirements for mounting location, color contrast, and non-glare surface. The interior of the building does not have proper signage and we recommend it should include adequately specified and correctly mounted signage.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

3. We recommend installation of accessible lever-type hardware on all first floor doors. Our opinion of the cost for this work is $2,750 ($250 each).

4. We recommend installation of interior signage in compliance with ADA guidelines. Our opinion of the cost for this work is $2,387 ($0.15 per square foot).

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Usability of Restrooms

The third priority emphasizes those measures that will provide individuals with disabilities with access to restroom facilities. The building contained men's and women's restrooms on each floor that are not compliant with the ADAAG, due to lack of floor clearances, fixture heights and controls and accessories provided. We recommend that one of the existing first floor restrooms be remodeled to make it fully compliant with the ADAAG.

Projected Capital Expenditures

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

5. We recommend budgeting for the complete reconfiguration and remodeling of one of the first floor restrooms to function as a uni-sex restroom, to include required accessibility modifications as outlined in the Americans with Disabilities Act. This work would include enlarging the restroom and its door to provide maneuverability and installation of accessible fixtures, fittings and accessories. We have recommended budgeting an allowance of $4,800 ($75 per square foot) for this work, to be constructed in 2010.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

Removal of Remaining Barriers

Drinking Fountains

The drinking fountain does not comply with Section 4.15 (Drinking Fountains and Water Coolers) of the ADAAG for approach, spout height and operation. We recommend its replacement in 2010, in order to comply with accessibility guidelines.

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

6. We recommend replacement of the first floor drinking fountain with an accessible model installed in compliance with accessible guidelines. Our opinion of cost for the work is $950.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

I. HAZARDOUS MATERIALS

I10 Hazardous Materials

Faithful+Gould was not requested to perform an environmental assessment of the Property and has not performed sampling or testing of materials as part of our assessment. However, as part of our assessment we noted materials that may be hazardous. Previous condition assessment reports were not available for review.

It is recommended that a Hazardous Materials Study (Phase I Environmental Site Assessment) be conducted at the subject property. Based upon our visual observation of the building, the building contains several potentially hazardous materials as detailed below:

- 9" x 9" and 12" x 12" floor tiles and associated mastics throughout the building that may be asbestos containing
- Ceiling tiles of varying sizes throughout the building that may be asbestos containing
- Pipe insulation at the mechanical room that may be asbestos containing

The hazardous materials observed during our evaluation varied in apparent condition from good (intact, non-friable and contained/encapsulated) to fair (minor friability or damaged boiler and pipe insulation). However, our evaluation consisted of a limited-scope visual assessment without the completion of sampling or destructive analysis. The true condition of the hazardous materials and the extent of the hazard they present will only be known after the completion of a more-in depth analysis.

Projected Capital Expenditures

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. We recommend conducting and environmental assessment of the Property to determine the presence of hazardous materials. Our opinion of the cost for this work is $10,000 in 2010.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

J. ENVIRONMENTAL ANALYSIS

J10 LEED Analysis

MINIMUM PROGRAM REQUIREMENTS

- The building must be fully occupied for at least 12 months preceding certification application; at least 75% of the floor area must be physically occupied at normal capacity and the corresponding building systems shall operate normally for a year.
- The project scope must include 100% of the total floor area of each building in the certification application, with the following exception: If operations are under separate management control for a portion of the building, up to 10% of its floor area may be excluded for that reason. Other exemptions are prohibited.
- The building must be in compliance with federal, state, and local environmental laws and regulations, including but not limited to those addressing asbestos, PCBs, water discharge, and water management.

At present, the percentage of physically occupied space within the building is more than 75%. The Engine Company No. 12 facility meets the Minimum Program Requirements for LEED EB certification at this point. The following sections will identify the areas in which the building can gain credits to become certified once the minimum program requirements have been achieved.

PREREQUISITE CREDITS

To be eligible achieve LEED Certified status, the building is required to meet all the prerequisite criteria, all of which are still to be achieved (refer to the LEED for Existing Buildings: Operations and Management Project Checklist):

Water Efficiency (WE) Prerequisite 1: Minimum Indoor Plumbing Fixture and Fitting Efficiency.

To achieve this prerequisite, potable water usage must be reduced to the level of or below the designated baseline for the building. The baseline is designated as 160% of the water usage that would occur if all the plumbing fixtures met the International Plumbing Code (IPC) 2006 fixture and fitting performance requirements. This baseline applies as the last major plumbing renovation was prior to 1993.

Energy & Atmosphere (EA) Prerequisite 1 – Minimum Efficiency Best Management Practices: Planning, Documentation and Opportunity Assessment.

This prerequisite can be achieved by documenting the operations of the building, and preparing systems narratives that describe the electrical and mechanical systems and the preventative maintenance required for them.

EA Prerequisite 2 – Minimum Energy Efficiency Performance

To achieve this prerequisite, the building is required to score a minimum EPA rating of 69 using the Energy Star Portfolio Manager tool.

EA Prerequisite 3 – Refrigerant Management: Ozone Protection

To achieve this prerequisite, evidence must be submitted indicating that the HVAC&R base building systems do not contain CFC-based refrigerants. If the current systems do contain CFC-based refrigerants, a phase out plan must be created and implemented or a third party audit is required to calculate whether the systems' replacement is economically feasible.

Materials & Resources (MR) Prerequisite 1 – Sustainable Purchasing Policy

This prerequisite requires that a sustainable purchasing policy is implemented for the building and site. This policy should include the on-going consumables as illustrated in MR Credit 1, and at least one further Sustainable purchasing credit, such as MR Credit 2: Sustainable Purchasing – Durable Goods.

MR Prerequisite 2 – Solid Waste Management Policy

This prerequisite can be achieved by providing a policy that identifies the requirements to achieve MR Credits 7, 8 and 9 which cover Ongoing Consumables, Durable Goods and Facility Alterations and Additions respectively. The prerequisite requires only policies, not actual sustainable performance, with the exception of the recycling of all mercury containing lamps.

Indoor Environmental Quality (EQ) Prerequisite 1 – Outdoor Air Introduction and Exhaust Systems

To achieve this prerequisite, evidence is required that the supply of outdoor air ventilation meets the rate required by ASHRAE 62.1-2007 Ventilation Rate Procedure under all normal operating conditions. Additionally; all air handlers are required to be measured for this prerequisite. An HVAC maintenance program is required to ensure the proper operations and maintenance of HVAC components, and testing and maintenance of all the building exhaust systems, including bathroom, shower, kitchen and parking exhaust systems is also required.

EQ Prerequisite 2 – Environmental Tobacco Smoke (ETS) Control

To ensure this prerequisite is achieved, the designated smoking areas need to be located 25 feet from building entries, outdoor air intakes and operable windows.

EQ Prerequisite 3 – Green Cleaning Policy

The policy required for this prerequisite covers the following points: the purchase of sustainable cleaning products and equipment, the implementation of Standard Operating Procedures (SOPs) for the cleaning of the building, hand hygiene strategies, chemical storage and handling standards, and staffing and training requirements for the maintenance personnel of the building.

The prerequisites indicated above are all feasibly achievable with building improvements and the adoption of sustainable building operations and maintenance policies.

CURRENT LEED CREDITS

At the time of assessment, the building was not deemed eligible for any LEED Credits, based on the conditions and operations observed and discussions with the on site staff. The score can be attributed to the current condition of the building and its operation.

CREDITS AVAILABLE THROUGH RECOMMENDED IMPROVEMENTS

The recommendations included in the LEED for Existing Buildings: Operations and Management Project Checklist provide opportunity for modifications to be made to the building or its operation in order to achieve LEED credits. This section will identify credits that can be gained for the building with the work recommended in the report and operations and maintenance policy and procedural changes.

Renovation of the restroom for accessibility for the disable will allow up to 3 credits to be gained in the Water Efficiency section by specifying and installing water efficient fixtures. To achieve the maximum credits possible, the new plumbing fixtures should reduce water consumption by at least 30% of the current base line water usage. For the Engine No. 12 facility, this would mean the building's plumbing fixtures and fittings must meet the requirements of the International Plumbing Code (IPC) 2006 Edition.

Further points can be gained in the Water Efficiency section by installing a meter to measure the total potable water use for the building, regularly recording the usage data and producing monthly and annual data summaries. This would achieve one credit, with an additional credit to be gained through the installation of a sub-meter to measure one of the following of water usage:

Indoor plumbing fixtures and fittings
HVAC system modifications
Domestic hot water
Other process water (dish washers, clothes washers, humidification systems etc)

The data from the metering of water usage in these systems must also be complied in monthly and annual summaries.

Renovation of the HVAC, lighting, and interiors may allow up to 10 credits to be gained in the Energy and Atmosphere section by specifying and installing equipment with an Energy Star rating of 69 or better, commissioning of the building systems, ongoing commissioning, use of ozone friendly refrigerants, and installation of a building automation system.

Renovation of the HVAC, lighting, and interiors may allow up to 4 credits to be gained in the Indoor Environmental Quality section by the installation of monitoring of ventilation systems, integrating increased ventilation rates on new air handlers, implementing an indoor air quality management plan for the construction changes, and utilizing increased entry mats to reduce outside contaminates from entering the building.

CREDITS AVAILABLE THROUGH STRATEGIC POLICY AND BEST PRACTICE

This section addresses the credits to be gained in operations and maintenance procedures which are not mentioned otherwise in our recommendations. These procedures include credits to be gained through the building management implementing Policies and Procedures that establish a more environmentally sustainable and efficient way to operate and maintain the building. The following credits appear within this category:

SS Credit 2.0 – Building Exterior and Hardscape Management Plan

One credit is available for the implementation of a management plan that reduces harmful chemical use, energy waste, water waste, air pollution, solid waste, and/or chemical runoff in the management of the building exterior and Hardscape areas. The plan is to cover the maintenance equipment, snow and ice removal, cleaning of building exterior, paints and sealants on building exterior and the cleaning of sidewalks, pavement and other Hardscape.

SS Credit 3.0 – Integrated Pest Management, Erosion Control and Landscape Management Plan

To achieve one point available for this credit, the building must have in place an environmentally sensitive management plan for the site's natural components. The plan must employ best management practices that significantly reduce harmful chemical use, energy waste, water waste, air pollution, solid waste, and/or chemical runoff (e.g., gasoline, oil, antifreeze, salts) compared with standard practices.

MR Credit 1.1 to 1.3 – Sustainable Purchasing: Ongoing Consumables

To achieve the 1 to 3 points available for this credit, the building has to maintain a sustainable purchasing program covering materials with a low cost per unit that are regularly used and replaced through the course of business. These materials include, but are not limited to, paper (printing or copy paper, notebooks, notepads, envelopes), toner cartridges, binders, batteries, and desk accessories but exclude food and beverages.

MR Credit 2.1 and 2.2 – Sustainable Purchasing: Durable Goods

Two possible points are available for the adoption of a sustainable purchasing program for high unit cost items, infrequently replaced and purchases that may require capital program outlays.

- Credit 2.1 is concerned with the purchases of electronic equipment such as computers, printers, monitors and appliances such as refrigerators and dishwashers (lists not exhaustive). To achieve this credit, 40% of purchases are required to be sustainable.
- Credit 2.2 is concerned with the purchases of furniture to achieve this credit, 40% of purchases are required to be sustainable.

For the purposes of this assessment, a conservative estimate of 40% has been made, scoring two credits.

MR Credit 3.0 – Sustainable Purchasing: Facility Alterations and Additions

One credit is available for maintaining a sustainable purchasing program for materials used for renovations, demolitions, retrofits and new construction additions. This applies to items or elements permanently or semi-permanently attached to the building, such as floor and ceiling finishes, and structural components such as wall studs (list not exhaustive). To achieve the credit, 50% of purchases are required to be sustainable.

MR Credit 4.0 – Sustainable Purchasing: Reduced Mercury in Lamps

This credit is a requirement as part of MR Prerequisite 1: Sustainable Purchasing Policy. To achieve the points in this credit, a sustainable purchasing policy needs is implemented for all lamp purchases in the study period and beyond. To achieve the maximum of two points, at least 90% of mercury containing lamps must have a maximum content of 70-picograms per lumen-hour. This credit does not cover the lamps currently installed within the building.

EQ Credit 3.1 – Green Cleaning: High-Performance Cleaning Program

There is a point available for having a sustainable cleaning policy that addresses; appropriate staffing levels, a training plan for maintenance personnel in the hazards, use, maintenance, disposal and recycling of cleaning chemicals, dispensing equipment and packaging; the use of chemical concentrates; the use of sustainable cleaning materials, products, equipment, janitorial paper products and trash bags; the use of sustainable cleaning and hard floor and carpet care products meeting the sustainability criteria outlined in EQ Credit 3.4 – 3.6 and the use of cleaning equipment meeting the sustainability criteria outlined in EQ Credit 3.7.

EQ Credit 3.2 and 3.3 – Green Cleaning: Custodial Effectiveness Assessment

To achieve the 2 possible points for this credit the building must score 2 or less in an audit with APPA Leadership in Educational Facilities “Custodial Staffing Guidelines” which will determine the appearance level of the facility. The audit must cover a representative sample of the different types of spaces within the building such as, offices, corridors etc.

EQ Credit 3.4 and 3.6 – Green Cleaning: Purchase of Sustainable Cleaning Products and Materials

The points in this credit are awarded for the percentage of cleaning products and materials purchase over the course of the study period that meet the sustainable criteria. One point is awarded each 30% of purchases. For the purposes of this assessment, we have targeted 60% of purchases to meet the criteria, scoring the building 2 points.

EQ Credit 3.7 – Green Cleaning: Sustainable Cleaning Equipment

To achieve the one point available for this credit, the building has to have in place a program for the use of janitorial equipment that reduces building contaminants and minimizes environmental impact. The cleaning equipment program must meet sustainable criteria such as operation at less than 70dBA, “Green Label”, Carpet and Rug Institute’s “Seal of Approval”, and equipped with environmentally friendly batteries.

SUMMARY

The recommendations provided above identify the necessary steps required to achieve certified status at this present time, using the LEED-Existing Buildings Operations and Maintenance rating system. A summary table showing potential LEED points is included on the following page.

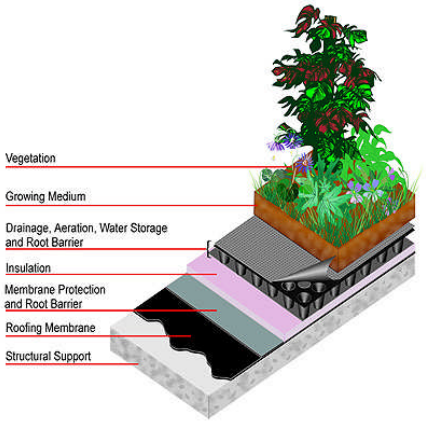
SUMMARY								
	Possible Maximum	**92**	**points**					
	LEED CERTIFIED Minimum	34	points					
	LEED SILVER Minimum	43	points					
	LEED GOLD Minimum	51	points					
	LEED PLATINUM Minimum	68	points					
		Pts	Existing Condition (1)		From FCA (2)		To LEED Certification (3)	
	Group Name	Possible	Detail/No of Credits	Notes	Detail/No of Credits	Notes	Detail/No of Credits	Notes
	Sustainable Sites	12	0		0		2	
	Water Efficiency	10	0		5		0	
	Energy and Atmosphere	30	0		10		0	
	Materials and Resources	14	0		0		7	
	Indoor Environmental Quality	19	0		4		6	
	Innovation in Operation, Upgrades & Maint.	7	0		0		0	
	Existing Condition (1)	92	0	Subtotal	**19**	Subtotal	**15**	Subtotal
	From FCA (2)		19					
	Total after FCA		19					
	To LEED Certification (3)		15					
	LEED TOTAL POINTS		**34**	**CERTIFIED**				
	(1) Existing Condition	Credits observed based on the facilities' condition and operations and maintenance procedures in place at the time of assessment.						
	(2) From Facility Condition Assessment (FCA)	Credits that can be achieved through the implementation of recommended improvements included in this FCA.						
	(3) To LEED Certification	Credits that can be achieved through the implementation of operations and maintenance policies and procedures, without the use of FCA requirements.						

J20 Green Roof Feasibility

Faithful+Gould was requested to conduct a study for the design and installation of a green roof system to support low impact development solutions. This study consisted of an evaluation of the existing roof structure, subsurface components (i.e. roof system), drainage systems and structural load limits.

Introduction

A green roof system consists of a landscaped system installed over the waterproofing membrane of a low-slope roof. For the Property, this would consist of a series of landscaped elements installed over the top of the existing low-slope roof areas. The sectional detail of a typical green roof system is as detailed in the attached plan, and includes the roof membrane, a root repellant system, a drainage system, filter cloth, an irrigation system and a lightweight growing medium and plants.



Options

The Property is faced with two principal options when deciding the type of green roof system to be installed.

1. Option one consists of an “Extensive Green Roof”. This type of system consists of a Soil Depth (Shallow depth) of 0.8 – 6 inches, an imposed weight on the structural systems of 15 – 50 lbs/sf (depending on the soil depth and type of substrate used), and require limited maintenance. The system is usually not meant to be publicly accessible except for maintenance purposes. Plant selection and diversity is based on hardiness and climate adaptability with plants typically chosen because of their shallow root systems. The variety of plants that can be used is limited compared to an intensive green roof. The growing medium consists of mineral-based mixture including gravel sand crushed brick, soil, lightweight expanded clay aggregate, peat, and organic matter.

2. Option two consists of “Intensive Green Roofs”. This system is similar to a traditional garden or manicured landscape Intensive green roofs are meant to be accessible or showcased for public use. Soil Depth is typically 6 inches or more (typically 8 – 24 inches). Weight load on the structure is significant at 80-150 lbs/sf. Maintenance is aggressive with the system requiring regular watering and landscaping. This system also requires a complex irrigation and drainage system

Based upon the configuration and extensive nature of the roof areas, no requirement for the green roof to be accessible for public use, and anticipated cost and construction constraints, we have recommended that if installed, an Extensive Green Roof be selected.

Existing Roof Structure and Structural Load Limits

The low-slope roofs are installed over either cast-in-place or pre-cast concrete decks. Structural drawings were not available to determine the designed live and dead loadings of the roof structures. Based upon the observed structural systems, we anticipate that the roof structures were designed with a superimposed live load sufficient enough to be of adequate capacity to allow installation of a green roof system.

Roof System & Drainage Systems

The building contained two adequately drained low-slope roof areas that, with proper maintenance, should be adequately drained and generally suitable for the installation of a green roof system.

Installation Costs

The cost for the installation of green roofs can vary considerably and will include the following major components:

- Consultant fees: Structural analysis, designers, landscapers, and contractors fees
- Structural analysis recommendations: Safety and repairs needed before installation of green roof.
- Irrigation system: Drip system (permanently installed) or sprinkler and drainage costs
- Garden materials: Growing medium, plants, fertilizers, substrate containers (extensive green roofs), and pavers (to prevent spread of fire and allow accessibility).
- Plants.
- Maintenance: Initial (extensive green roofs) and sometimes long-term (intensive green roofs) maintenance costs depending on the size and type of green roof installed. For example, extensive green roofs regular maintenance is only needed for 6-12 months (after plants are established) after which watering a weeding once a season is sufficient.
- Professional assistance and permits.

Based upon these costs and the project constraints (i.e. multiple roof areas), we an allowance of $12 per square foot is reasonable for this work. Our unit rate for this work is based upon the cost factors detailed within Table J-20.

Table J-20 Green Roof Cost Factors

Component	Costs Per Square Foot	Cost Factors
Green Roof System (drainage, filtering, paving, growing medium)	$7	Growing medium (type and depth), pavers (size and type), and square footage of the green roof (project size)
Plants	$2	Season of installation, type of plants, and size of seeds being planted
Installation and Labor	$3	Equipment necessary to move materials on to the roof (E.g. crane, if rented is: $ 4,000/day), project size, design, and planting methods

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. The installation of a green roof system on the low slope roofs at the subject Property, if determined to be desirable for this facility, is estimated to cost $82,800 ($12 per square foot).

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

J30 Energy Efficiency

Faithful+Gould was requested to identify areas of the building that could be improved to increase energy efficiency. Buildings make up 40% of total U.S. energy consumption (including two-thirds of the country's

electricity) and 16% of total U.S. water consumption. They are responsible for 40% of all material flows and produce 15%– 40% of the waste in landfills within the D.C. market.

Older buildings such as the Property contribute significantly to this energy use and therefore provide a potential source to reduce energy use through improving energy efficiency. The Property contains several systems that although efficient at the time of installation now represent poorly efficient installations that can be replaced or modified to achieve energy savings. Based upon our evaluation of the Property, we identified the following as the primary source for energy savings:

- Building Lighting Systems
- Exit Signs
- Plumbing Fixtures

Projected Expenditures

Required Capital Expenditures:

Priority 1 (Immediate)

No required capital expenditures are anticipated at this time.

Priority 2 (2010)

No required capital expenditures are anticipated at this time.

Priority 3 (2011 – 2014)

No required capital expenditures are anticipated at this time.

Priority 4 (2015)

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

Priority 1 (Immediate)

No required maintenance expenditures are anticipated at this time.

Priority 2 (2010)

1. Building Lighting: The Property uses outdated incandescent lamps and non-energy efficient ballasts. These lamps use significant power. Replacing the existing building lights with energy efficient fluorescent tube and compact fluorescent fixtures will result in significant cost savings. Based upon the quantity, spacing and types of lights installed at the Property, we anticipate that existing lights each use between

100 – 200 kilowatts per hour. Replacement compact fluorescent fixtures will typically use 58 – 104 kilowatts per hour providing immediate cost savings. The cost for this item is included in the lighting replacement costs in Section D50, Electrical.

2. Exit Signs: Presently, there are limited existing exit signs. When exit signs are installed, the signs should consist of LED fixtures that will result in significant cost savings. The cost for this item is included in the exit and egress lighting costs of in Section D40, Fire Protection.

3. We also recommend budgeting $4,500 ($225 each) for various plumbing fixture upgrades, including flush valves and low-flow fixtures to reduce the water consumption of the Property.

Priority 3 (2011 – 2014)

No required maintenance expenditures are anticipated at this time.

Priority 4 (2015)

No required maintenance expenditures are anticipated at this time.

SPACE UTILIZATION SURVEY

Faithful+Gould was requested to develop an occupancy profile for the Property to indicate current utilization of the building. This effort consisted of producing a location and tenant specific inventory of furnishings and people, developing a floor plan for each occupiable floor, and calculating various usable and gross floor area matrixes. The process used to generate these deliverables along with the findings of our study are detailed below.

Inventory & Occupancy Number

Faithful+Gould walked the interior of each occupiable area of the Property, quantified major items of furniture and counted the number of persons contained within those spaces. The intent is that this list will provide an inventory of contained furnishings and details of the number of occupants within each area. Upon completion of our on-site assessment, we entered our findings into a database system that allows sorting by any of the major system elements (i.e. floor, tenant, furniture etc.). The results of this inventory and occupancy profile are included within the following pages. A sample of this sheet is shown below.

FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

By Tenant

Printed: 3/2/2009
Filter: NONE

FEMS/MPD **FEMS/MPD**

Tenant	Space Name	Space ID	Space Use	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Communication Center Annex & New Facility	Shower	115	Storage	1											
Communication Center Annex & New Facility	MPD Watch Commander	156	Office	1	1	1	2	1	2						
Communication Center Annex & New Facility	Server Room	146	Server	1	0										
Communication Center Annex & New Facility	Server Room	102	Server	1	0										
Communication Center Annex & New Facility	UPS Room	148	Uninteruptable Power Supply	1	0										
Communication Center Annex & New Facility	Kitchen	107	Food Preparation	1	0										3
Communication Center Annex & New Facility	Vending	108	Vending	1	0										
Communication Center Annex & New Facility	Dining	110	Dining	1			15					6			
Communication Center Annex & New Facility	Janitors Closet	132	Storage	1											
Communication Center Annex & New Facility	Conference / SOCC	114	Conference	1	0		12					3			
Communication Center Annex & New Facility	Radio Shop	None	Office	1	4	4	4	2	2		2				
Communication Center Annex & New Facility	Intermediate Distribution Frame Room	118	Telecommunications	1											
Communication Center Annex & New Facility	Electrical Room	119	Electrical Service	1											
Communication Center Annex & New Facility	No Name	120	Vacant	1		2									
Communication Center Annex & New Facility	MPD Captain Office	117	Vacant	1											
Communication Center Annex & New Facility	Chief Operations Unit Fire EMS	125	Office	1	1	1	1	1							
Communication Center Annex & New Facility	Watch Commander Fire EMS	151	Office	1	1	1	1	1							
Communication Center Annex & New Facility	Fire EMS Transcript Room	201	Office	2	1	1	1	1	1						
Communication Center Annex & New Facility	MPD Cell Phone & Pager Unit	111	Office	1	7	7	7				7				
Communication Center Annex & New Facility	Training Classroom / Conference	224	Training	2	0	14	9	0	0			0			

Page 1 of 5 Faithful + Gould Condition Assessment

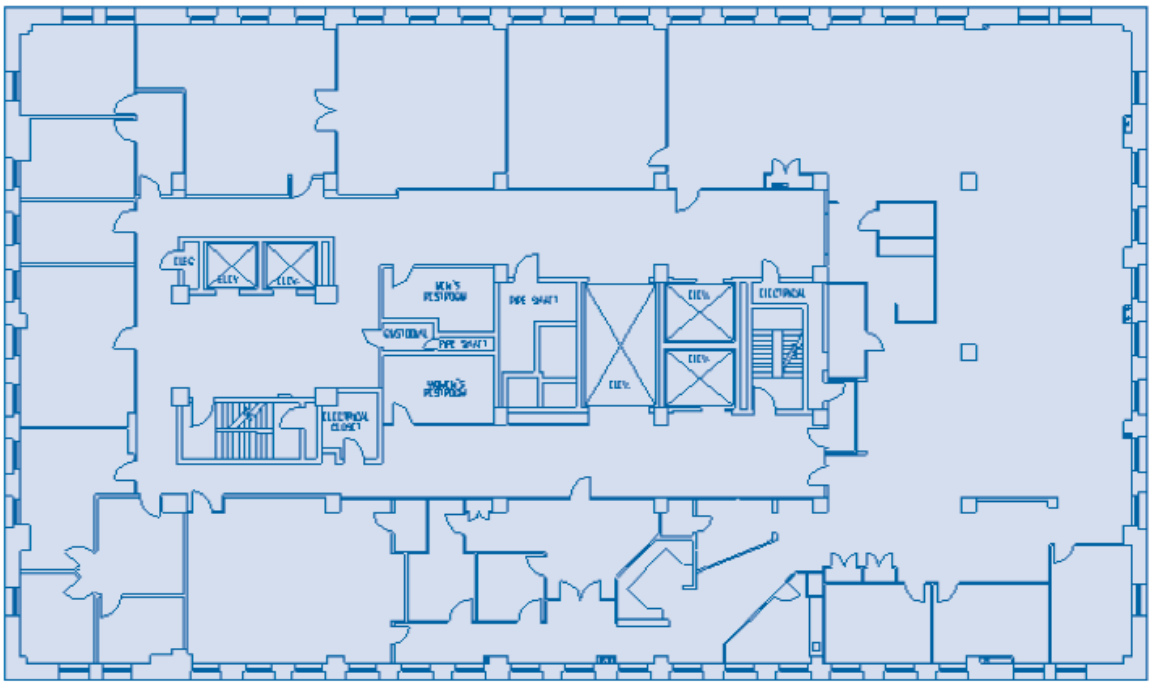
Floor Plans & Area Calculations

In conjunction with the completion of our on-site inventory and occupancy survey, we completed detailed measurements of the building interiors. Measurements were taken to determine the interior dimensions of each room and common area, the interior area of each room, the location of all walls, partitions, doors, and windows, and the location and extent of the building core area, including elevator shafts, toilets, storage area, public corridors and other support areas.

At the conclusion of our on-site measurements we produced space level floor plans of each occupiable level using AutoCAD. Floor plans were utilized to determine the key building measurements detailed below. On-site measurements and floor area calculations were completed in accordance with the PBS National Business Assignment Guide standards and ANSI/BOMA Z65.1-1996.

Gross Floor Area

Gross Measured Area is the total "constructed area" of a building (also referred to as Design Gross). NOTE: In Federal and Leased buildings where the government is the sole tenant, this area is the Total Construction Area. However, in Leased buildings where the government is a partial tenant, the Design Gross is the occupied portion plus the pro rated share of the Common space.



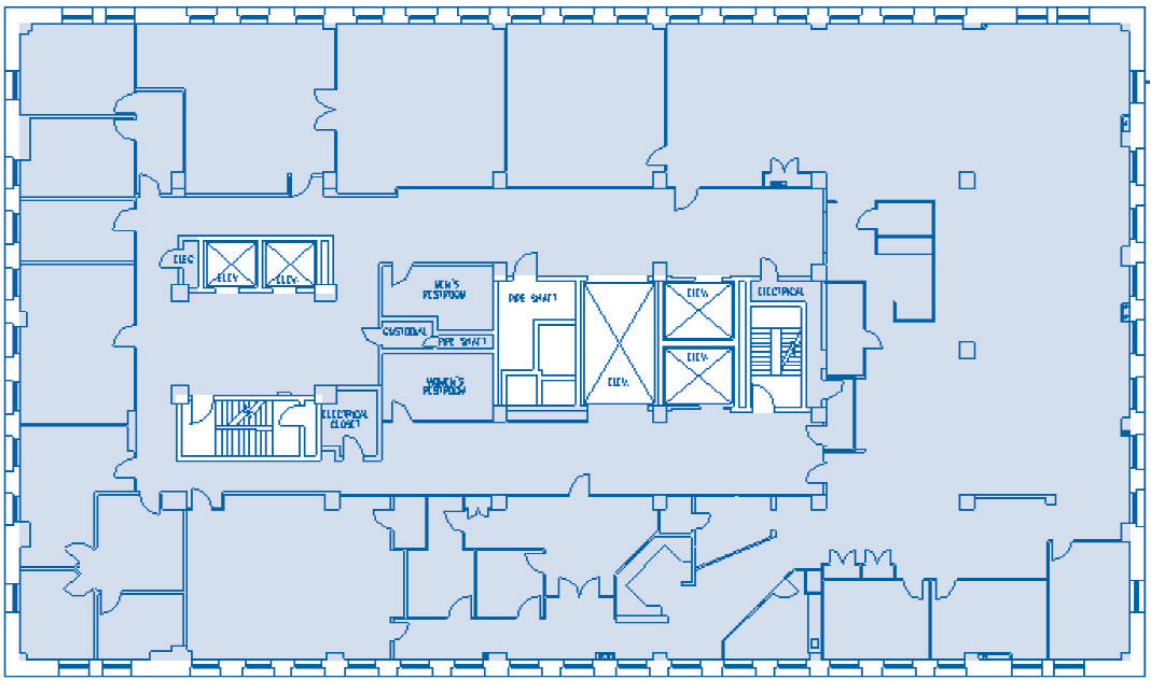
The Gross Measured Area is typically used for measuring building value and/or building costs. It is calculated by measuring to the outside dominant finished surface (without deductions) and adding the sum of all enclosed floors including:

- Basements and Sub-basements;
- Mechanical equipment floors;
- Penthouses;
- Structured parking;

- Crawl space.

Net Rentable Area

Rentable (ANSI Rentable) area is defined as the tenant's usable area plus their share of Building Common area. Non-assignable area(s) are not included in this calculation. Rentable is used to calculate the tenant's rent bill and is calculated as follows: Rentable = Usable area + Building Common.



Building Common

Building Common
Assigned as ANSI Category 02 and according to BOMA the Building Common area is "the areas of a building that provide services or circulation to building tenants but which are not included in the Office or Storage area of any specific tenant. EXCLUDED from Building Common are parking, portions of loading docks outside the building line and major vertical penetrations (see above)." Specific examples and/or illustrations of Building Common are as follows:

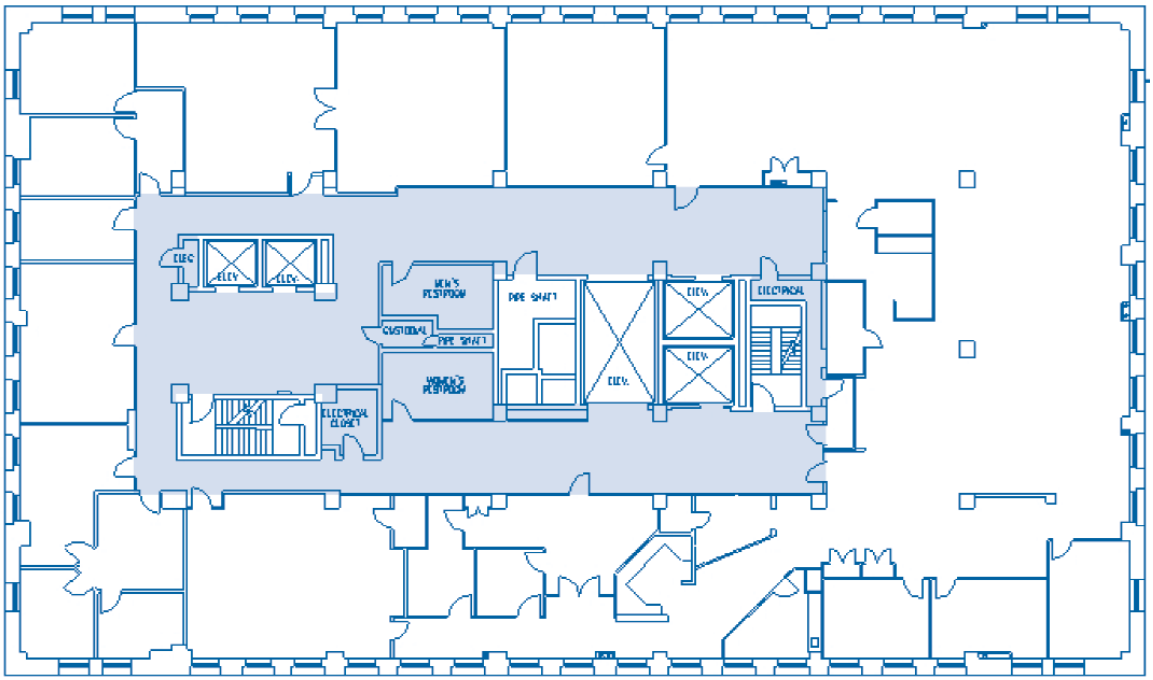
- Public corridors and main auxiliary lobbies used by all tenants in the building;
- Tenant support or security areas such as concierges, security desks and fire control rooms;
- Fully enclosed courtyards within the building line;
- Mechanical and/or telephone rooms that service (support) more than one floor (i.e. the whole building) and are not specialty spaces for a single tenant;
- Public toilets used by all tenants that are required by the Uniform Building Code for the floor where they are located. The public toilet square footage includes the associated plumbing chase and (according to BOMA) are NOT vertical penetrations; and
- Spaces used for the sole purpose of supporting building operations or upkeep, such as:
- Property Management Office (PMO) specifically used to support or service the building in which it is located;

- Spaces used to house or support building operations and maintenance, such as: storage rooms (doors, paint, light bulbs, ceiling tiles…), maintenance offices and contractor space used specifically to support or service the building in which it is located; and
- Guard and building monitoring stations within the building, but are NOT used for other types of office functions.

Floor Common

Assigned as ANSI Category 03 and according to BOMA, the Floor Common Area is "the areas on a floor, such as washrooms, janitorial closets, electrical and telephone rooms, mechanical rooms, elevator lobbies and public corridors that are available primarily for the use of the tenants on that floor." Specific examples and/or illustrations of Floor Common are as follows:

- Horizontal Circulation spaces such as public corridors and elevator lobbies;
- Public toilets (and associated plumbing chases) required by the Uniform Building Code for the floor where they are located; and
- Support spaces such as janitorial closets, electrical, telephone, mechanical and equipment rooms that specifically support the floor on which it is located.

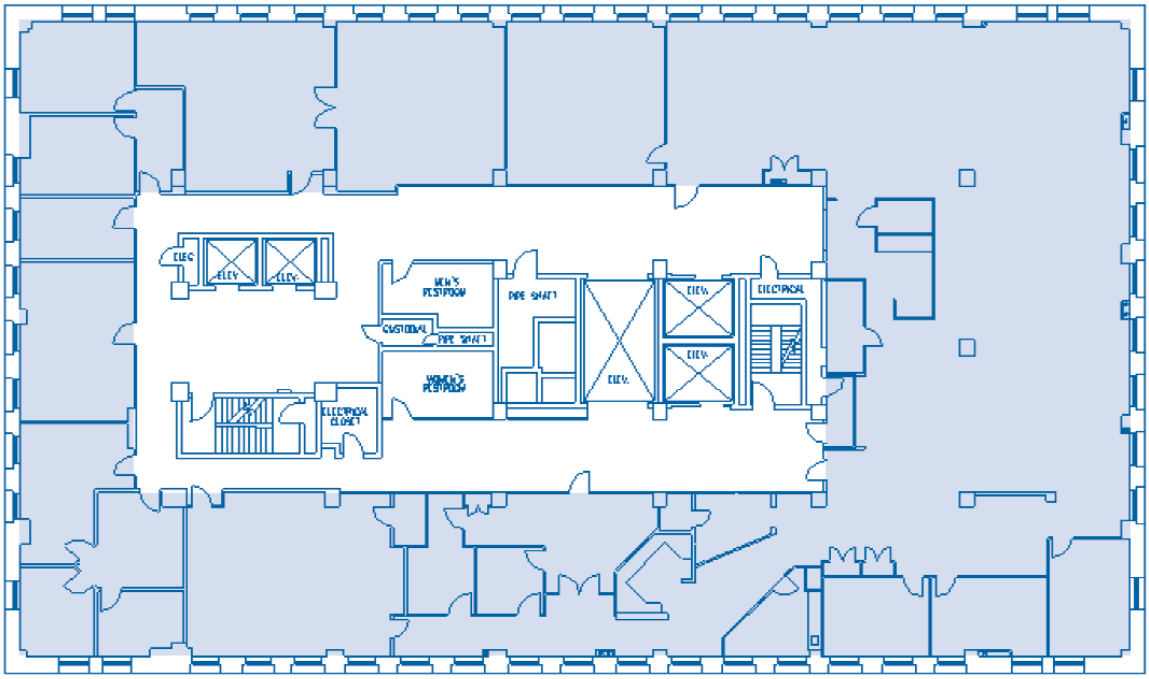


Building Common is calculated by summing all of the following Space Types within a particular building:

- Circulation Horizontal (CRH)
- Mechanical (MCH)
- Toilets (TLT)
- Custodial (CST)

Usable

Usable space (ANSI Usable) is defined as all Assignable and Joint Use space within the building. This is used for calculating the actual space occupied by tenants. The calculation to determine usable square footage is to measure the area(s) enclosed between the Finished Surfaces of Office Areas (ex. the office side of a corridor), the dominant portion or major vertical penetration and the center of partitions that separate office spaces. No deduction is made for columns and projections necessary to the building.



Vertical Penetrations

Assigned as ANSI Category 04 and according to BOMA, Vertical Penetrations are "the areas such as stairs, elevator shafts, flues, pipe shafts, vertical ducts and their enclosing walls are considered vertical penetrations. Atria, lightwells and similar penetrations above the finished floor are also included within this definition." Specific examples and/or illustrations of Vertical Penetrations are as follows:

- Generally, the space must be large enough for a person to fit comfortably through the penetration (approximately 9 square feet);
- The space must be deducted from the floor slab it penetrates—however, sleeved slabs and/or openings for plumbing, electrical or telephone chases are NOT vertical penetrations;
- Examples of common vertical penetrations are:
  - Atrium spaces that are NOT an amenity to a single tenant,
  - Attic space on a mezzanine floor level,
  - Elevator shafts,
  - Incinerator chimneys,
  - Fire egress stairwells,
  - Public and or multi-tenant stairs, and
  - Return/supply air chase; and
- Vertical penetrations built specifically for the private use of a tenant are NOT classified as vertical penetrations

Property Specific Calculations

Gross Floor Area

The Gross Measured Area is calculated by measuring to the **outside** dominant finished surface (without deductions) and adding the sum of all enclosed floors including:

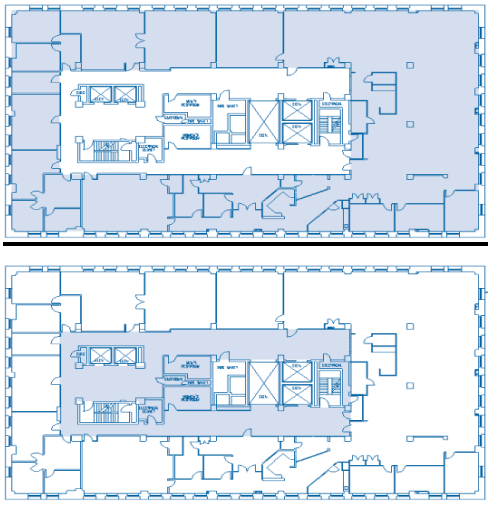
- Basements and Sub-basements;
- Mechanical equipment floors;
- Penthouses;
- Structured parking;
- Crawl space.

Engine 12	
Floor Number	**Gross Measured Area (SF)**
1	8,758
2	7,155
TOTAL	**15,913**

Net Rentable Area

Rentable (ANSI Rentable) area is defined as the tenant's usable area plus their share of Building Common area. Non-assignable area(s) are not included in this calculation. Rentable is used to calculate the tenant's rent bill and is calculated as follows: Rentable = Usable area + Building Common.

Rentable = Usable Area + Building Common



Usable Area = Usable space is defined as all Assignable and Joint Use space within the building. The calculation used to determine usable square footage is to measure the area(s) enclosed between the Finished Surfaces of Office Areas (ex. the office side of a corridor), the dominant portion or major vertical penetration and the center of partitions that separate office spaces. No deduction is made for columns and projections necessary to the building. The area shaded blue on the attached plan is measured. The central core shown in white is not measured.

Building Common = Building common is "the areas of a building that provide services or circulation to building tenants but which are not included in the Office or Storage area of any specific tenant. EXCLUDED from Building Common are parking, portions of loading docks outside the building line and major vertical penetrations.

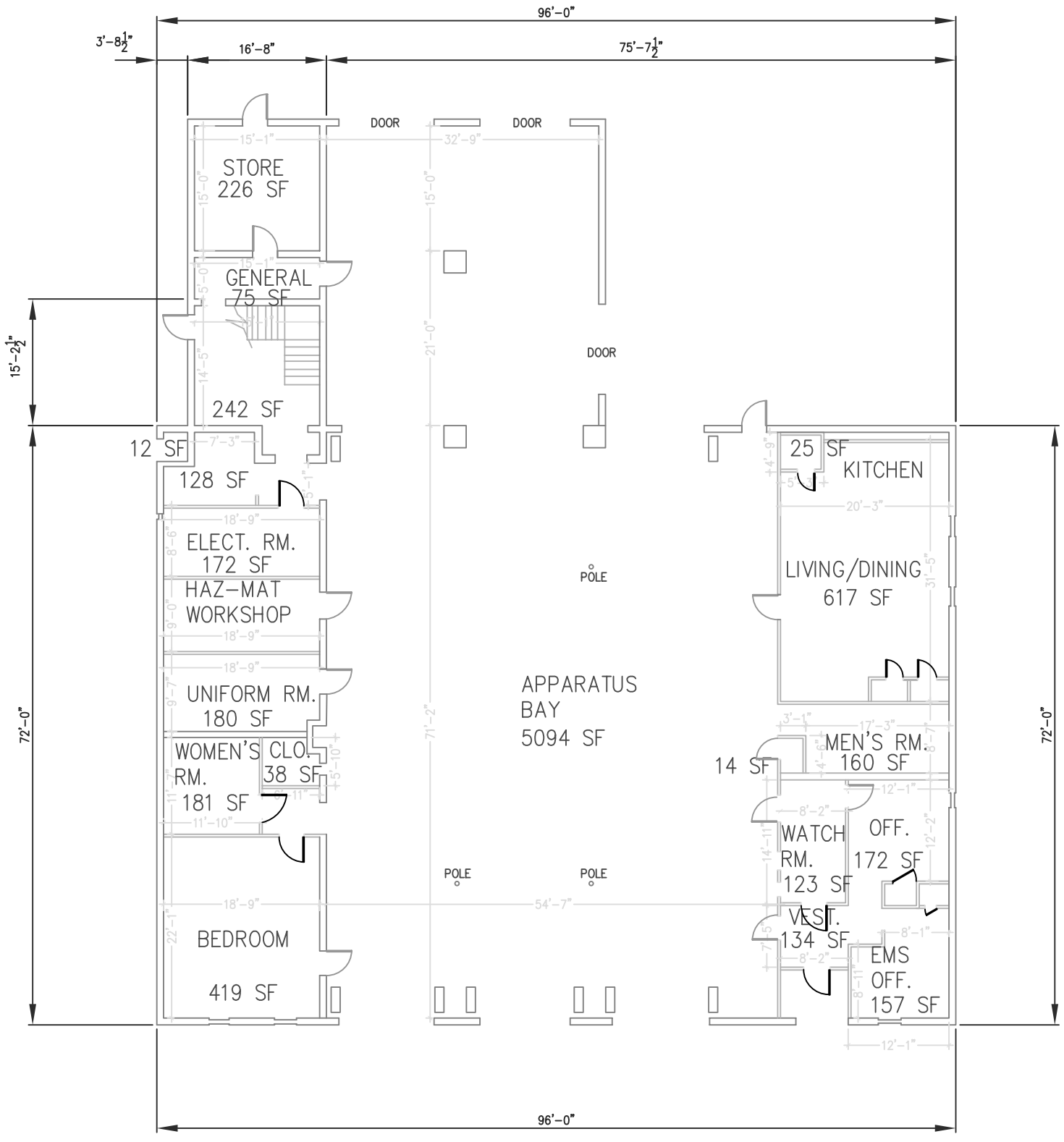
As the building is configured for single tenant use the net rentable area is basically the floor area measured from the interior face of the exterior walls minus the area of the major vertical penetrations. Major vertical penetrations consist of vertical shafts, stairs and chimneys.

Net Rentable Area Calculation

Engine 12	
Floor Number	**Net Measured Area (SF)**
1	8,481
2	6,778
TOTAL	**15,259**

Tenant Profiles & Inventory

The building is 100% occupied by the Fire and Emergency Management Department and provides accommodation for 17 people.



GROSS FLOOR AREA = 8758 SF
NET RENTABLE AREA = 8481 SF

FIRST FLOOR PLAN

SCALE : 1/16" = 1'

N
PROJECT NORTH

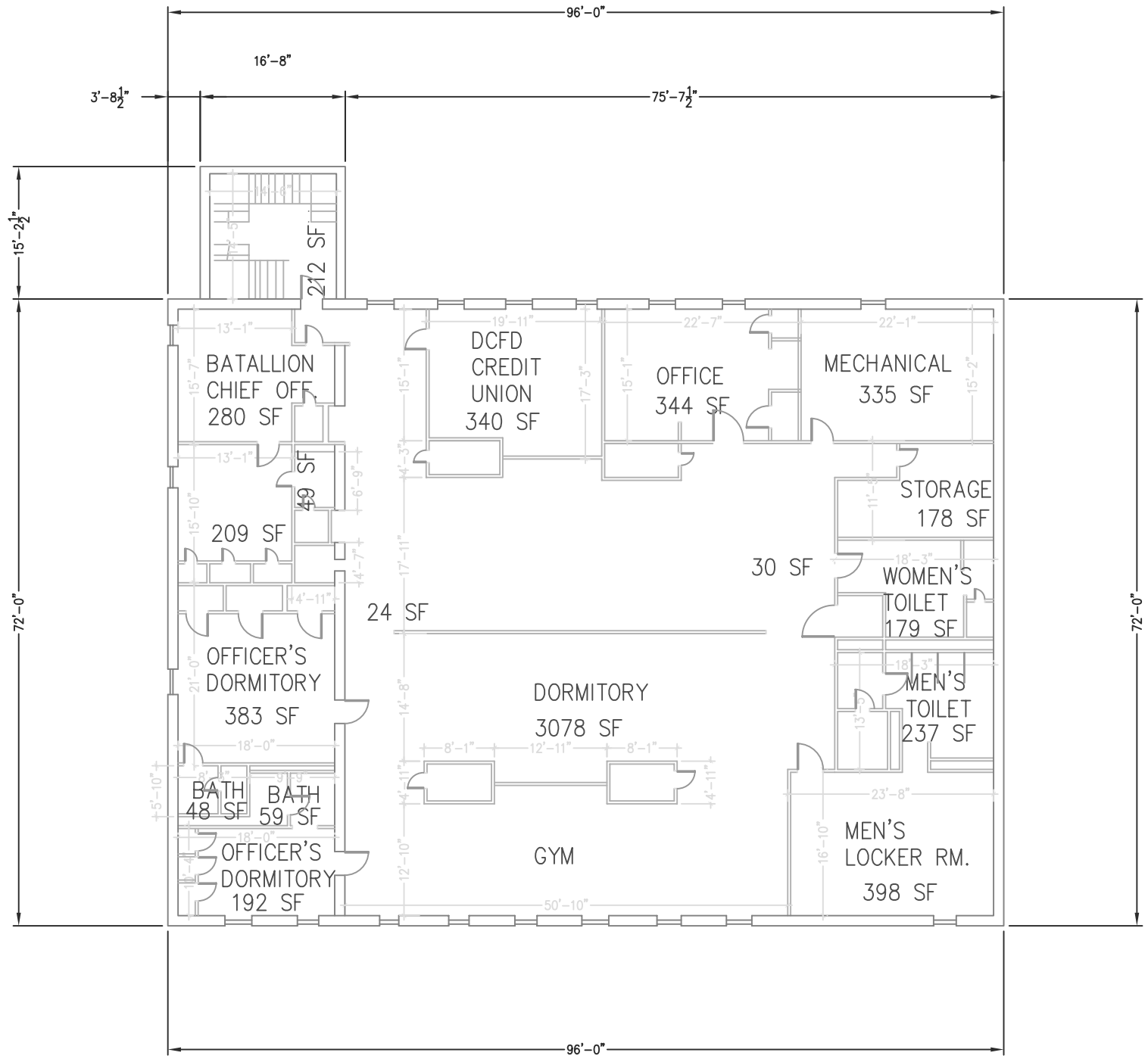
FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ENGINE COMPANY No.12

Sheet No.:
1

Sheet Title:

Description:
FIRST FLOOR PLAN



GROSS FLOOR AREA = 7155 SF
NET RENTABLE AREA = 6778 SF

SECOND FLOOR PLAN

SCALE : 1/16" = 1'

N
PROJECT NORTH

FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ENGINE COMPANY No.12

Sheet No.:
1

Sheet Title:

Description:
SECOND FLOOR PLAN

Inventory and Occupancy

By Building

FAITHFUL+GOULD

Engine 12

Tenant	Tenant ID	Space Name	Space ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
FEMS	Fire & Emergency Management Service	Batallion Chief's Office		Office	280	2	1	1	2	2	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Electrical Room		Electrical	172	1	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Haz-Mat Workshop		Workshop	180	1	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Women's Restroom		Restroom	181	1	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Community Room		Assembly	419	1	0	0	6	0	0	0	0	0	1	0	0
FEMS	Fire & Emergency Management Service	Kitchen / Dining		Kitchen / Dining	617	1	0	0	7	0	0	0	0	0	1	0	1
FEMS	Fire & Emergency Management Service	Men's Restroom		Restroom	160	1	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Watch Room		Office	123	1	0	1	2	2	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Storage		Storage	226	1	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Apparatus Bay		Apparatus	5094	1	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Men's Locker Room		Locker Room	398	2	0	0	0	0	0	0	0	0	0	0	0

Engine 12

Continued from previous page ....

Tenant	Tenant ID	Space Name	Space ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
FEMS	Fire & Emergency Management Service	Officer's Dormitory		Office	383	2	1	1	2	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Officer's Dormitory		Office	192	2	1	1	2	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	DCFD Credit Union		Office	340	2	1	1	2	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Dormitory / Gym		Accomodation / Fitness	3078	2	11	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Office		Office	344	2	2	2	3	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Men's Restroom		Restroom	237	2	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	Women's Restroom		Restroom	179	2	0	0	0	0	0	0	0	0	0	0	0
FEMS	Fire & Emergency Management Service	EMS Office		Office	157	1	0	1	2	0	0	0	0	0	0	0	0
				Total for Engine 12			17	8	28	4	0	0	0	0	2	0	1
				Total for Report			17	8	28	4	0	0	0	0	2	0	1

Inventory and Occupancy

By Floor

FAITHFUL+GOULD

1

Building	Tenant	Space Name	Space ID	Space Use	SF	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Apparatus Bay		Apparatus	5094	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Electrical Room		Electrical	172	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Haz-Mat Workshop		Workshop	180	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Women's Restroom		Restroom	181	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Community Room		Assembly	419	0	0	6	0	0	0	0	0	1	0	0
Engine 12	FEMS	Kitchen / Dining		Kitchen / Dining	617	0	0	7	0	0	0	0	0	1	0	1
Engine 12	FEMS	Men's Restroom		Restroom	160	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Watch Room		Office	123	0	1	2	2	0	0	0	0	0	0	0
Engine 12	FEMS	Storage		Storage	226	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	EMS Office		Office	157	0	1	2	0	0	0	0	0	0	0	0
				Total for 1		0	2	17	2	0	0	0	0	2	0	1

2

Building	Tenant	Space Name	Space ID	Space Use	SF	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Men's Locker Room		Locker Room	398	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Officer's Dormitory		Office	383	1	1	2	0	0	0	0	0	0	0	0
Engine 12	FEMS	Officer's Dormitory		Office	192	1	1	2	0	0	0	0	0	0	0	0
Engine 12	FEMS	DCFD Credit Union		Office	340	1	1	2	0	0	0	0	0	0	0	0
Engine 12	FEMS	Dormitory / Gym		Accomodation / Fitness	3078	11	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Office		Office	344	2	2	3	0	0	0	0	0	0	0	0
Engine 12	FEMS	Men's Restroom		Restroom	237	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Women's Restroom		Restroom	179	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Batallion Chief's Office		Office	280	1	1	2	2	0	0	0	0	0	0	0
				Total for 2		17	6	11	2	0	0	0	0	0	0	0
				Total for Report		17	8	28	4	0	0	0	0	2	0	1

Inventory and Occupancy

By Space

FAITHFUL+GOULD

Apparatus Bay

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Apparatus	5094	1	0	0	0	0	0	0	0	0	0	0	0
			Total for Apparatus Bay			0	0	0	0	0	0	0	0	0	0	0

Batallion Chief's Office

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Office	280	2	1	1	2	2	0	0	0	0	0	0	0
			Total for Batallion Chief's Office			1	1	2	2	0	0	0	0	0	0	0

Community Room

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Assembly	419	1	0	0	6	0	0	0	0	0	1	0	0
			Total for Community Room			0	0	6	0	0	0	0	0	1	0	0

DCFD Credit Union

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Office	340	2	1	1	2	0	0	0	0	0	0	0	0
			Total for DCFD Credit Union			1	1	2	0	0	0	0	0	0	0	0

Dormitory / Gym

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Accomodation / Fitness	3078	2	11	0	0	0	0	0	0	0	0	0	0
			Total for Dormitory / Gym			11	0	0	0	0	0	0	0	0	0	0

Electrical Room

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Electrical	172	1	0	0	0	0	0	0	0	0	0	0	0
			Total for Electrical Room			0	0	0	0	0	0	0	0	0	0	0

EMS Office

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Office	157	1	0	1	2	0	0	0	0	0	0	0	0
			Total for EMS Office			0	1	2	0	0	0	0	0	0	0	0

Haz-Mat Workshop

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Workshop	180	1	0	0	0	0	0	0	0	0	0	0	0
			Total for Haz-Mat Workshop			0	0	0	0	0	0	0	0	0	0	0

Kitchen / Dining

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Kitchen / Dining	617	1	0	0	7	0	0	0	0	0	1	0	1
			Total for Kitchen / Dining			0	0	7	0	0	0	0	0	1	0	1

Men's Locker Room

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Locker Room	398	2	0	0	0	0	0	0	0	0	0	0	0
			Total for Men's Locker Room			0	0	0	0	0	0	0	0	0	0	0

Men's Restroom

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Restroom	237	2	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Fire & Emergency Management Service	Restroom	160	1	0	0	0	0	0	0	0	0	0	0	0
			Total for Men's Restroom			0	0	0	0	0	0	0	0	0	0	0

Office

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Office	344	2	2	2	3	0	0	0	0	0	0	0	0
			Total for Office			2	2	3	0	0	0	0	0	0	0	0

Officer's Dormitory

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Office	192	2	1	1	2	0	0	0	0	0	0	0	0
Engine 12	FEMS	Fire & Emergency Management Service	Office	383	2	1	1	2	0	0	0	0	0	0	0	0
			Total for Officer's Dormitory			2	2	4	0	0	0	0	0	0	0	0

Storage

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Storage	226	1	0	0	0	0	0	0	0	0	0	0	0
			Total for Storage			0	0	0	0	0	0	0	0	0	0	0

Watch Room

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Office	123	1	0	1	2	2	0	0	0	0	0	0	0
			Total for Watch Room			0	1	2	2	0	0	0	0	0	0	0

Women's Restroom

Building	Tenant	Tenant ID	Space Use	SF	Floor	# Occ's	Desks	Chairs	Filing Cabinets	Book Shelves	Workstations (Triple)	Workstations (Single)	Tables (Standard)	Tables (Conference)	Sofas	Fridges
Engine 12	FEMS	Fire & Emergency Management Service	Restroom	181	1	0	0	0	0	0	0	0	0	0	0	0
Engine 12	FEMS	Fire & Emergency Management Service	Restroom	179	2	0	0	0	0	0	0	0	0	0	0	0
			Total for Women's Restroom			0	0	0	0	0	0	0	0	0	0	0
			Total for Report			17	8	28	4	0	0	0	0	2	0	1

Appendix A

Six Year Capital Expenditure Forecast

FAITHFUL GOULD

SIX YEAR CAPITAL EXPENDITURE FORECAST
Engine Company #12
2225 5th Street, NE
Washington, D.C. 20002

ITEM	EUL	RUL	Unit Cost	Quantity	Unit of Measurement	Priority	Repair / PM	Replace	A/E Serv.	GC Allow.	Immediate	2010 Year 1	2011 Year 2	2012 Year 3	2013 Year 4	2014 Year 5	2015 Year 6	TOTAL
											Priority 1	Priority 2	Priority 3				Priority 4	
A. SUBSTRUCTURE																		
A10 Foundations																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
A20 Basement Construction																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
SUBSTRUCTURE TOTALS =																		$0
B. SHELL																		
B10 Superstructure																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
B20 Exterior Closure																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
B30 Roofing																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
SHELL TOTALS =																		$0
C. INTERIORS																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
INTERIORS TOTALS =																		$0
D. SERVICES																		
D10 Conveying																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
D20 Plumbing																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
D30 HVAC																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
D40 Fire Protection																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
D50 Electrical																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
SERVICES TOTALS =																		$0

SIX YEAR CAPITAL EXPENDITURE FORECAST
Engine Company #12
2225 5th Street, NE
Washington, D.C. 20002

ITEM	EUL	RUL	Unit Cost	Quantity	Unit of Measurement	Priority	Repair / PM	Replace	A/E Serv.	GC Allow.	Immediate	2010 Year 1	2011 Year 2	2012 Year 3	2013 Year 4	2014 Year 5	2015 Year 6	TOTAL
											Priority 1	Priority 2	Priority 3				Priority 4	
E. FURNISHINGS & EQUIPMENT																		
E10 Equipment																		
No Capital Expenditures are Forecasted																		
E20 Furnishings																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
FURNISHINGS & EQUIPMENT TOTALS =																		$0
F. SPECIAL CONSTRUCTION & DEMOLITION																		
F10 Special Construction																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
SPECIAL CONSTRUCTION & DEMOLITION TOTALS =																		$0
G. BUILDING SITEWORK																		
G10 Site Systems																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
BUILDING SITEWORK TOTALS =																		$0
H. ACCESSIBILITY																		
H10 Site Improvements																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
ACCESSIBILITY TOTALS =																		$0
I. HAZARDOUS MATERIALS																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
HAZARDOUS MATERIALS TOTALS =																		$0
J. ENVIRONMENTAL ANALYSIS																		
J10 LEED Analysis																		
No Capital Expenditures are Forecasted																		$0
SECTION SUBTOTALS =																		$0
J20 Green Roof Feasibility																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
J30 Energy Efficiency																		
No Capital Expenditures are Forecasted																		
SECTION SUBTOTALS =																		$0
ENVIRONMENTAL ANALYSIS TOTALS =																		$0
TOTALS											$0	$0	$0	$0	$0	$0	$0	$0
TOTALS (w/ Inflation @ 4%)											$0	$0	$0	$0	$0	$0	$0	$0

Total Expenditures (current $)	**$345,377**
Expenditures Considered by FCI (Exc. Environ. Analysis, Includes Maintenance)	**$228,077**
Current Replacement Value (current $)	**$2,355,124**
Facility Condition Index (FCI)	**0.10**

Appendix B

Six Year Maintenance Forecast

FAITHFUL GOULD

SIX YEAR MAINTENANCE FORECAST
Engine Company No.12
2225 5th Street NE
Washington, D.C. 20002

	ITEM	EUL	RUL	Unit Cost	Quantity	Unit of Measurement	Priority	Repair / PM	Replace	A/E Serv.	GC Allow.	Immediate	2010 Year 1	2011 Year 2	2012 Year 3	2013 Year 4	2014 Year 5	2015 Year 6	TOTAL
												Priority 1	Priority 2	Priority 3				Priority 4	
A. SUBSTRUCTURE																			
A10 Foundations																			
	No Maintenance Expenditures are Forecasted																		
					SECTION SUBTOTALS =														$0
A20 Basement Construction																			
	No Maintenance Expenditures are Forecasted																		
					SECTION SUBTOTALS =														$0
					SUBSTRUCTURE TOTALS =							$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																			
B10 Superstructure																			
	No Maintenance Expenditures are Forecasted																		
					SECTION SUBTOTALS =														$0
B20 Exterior Closure																			
1	Repair Pre-cast Concrete Panels	40	1	$7,205.00	1	LS	2	√					$7,205						$7,205
2	Paint Pre-cast Concrete Panels	7	1	$1.25	3,300	SF	2	√					$4,125						$4,125
3	Replace Façade Sealants	15	1	$13.60	2,700	LF	2	√					$36,720						$36,720
4	Repair Exterior Doors/Frames	15	1	$500.00	4	EA	2	√					$2,000						$2,000
5	Replace Bifold Door Operators	20	1	$6,900.00	4	EA	2		√				$27,600						$27,600
6	Paint Exterior Doors/Frames and Window Grilles	15	1	$250.00	29	EA	2	√					$7,250						$7,250
7	Replace Door and Window Frame Sealants	15	1	$13.60	772	LF	2	√					$10,500						$10,500
					SECTION SUBTOTALS =								$95,400						$95,400
B30 Roofing																			
1	Repair Roofing	20	10	$5.00	100	SF	2	√					$500						$500
2, 3	Roof Preventive Maintenance	NA	NA	$500.00	1	YR	Varies	√					$500	$500	$500	$500	$500	$500	$3,000
					SECTION SUBTOTALS =								$1,000	$500	$500	$500	$500	$500	$3,500
					SHELL TOTALS =							$0	$96,400	$500	$500	$500	$500	$500	$98,900
C. INTERIORS																			
1	Replace Damaged Ceiling Tile	10	1	$6.11	80	SF	2	√	√				$489						$489
2	Replace Damaged VCT and Ceramic Tile	15	1	$571.00	1	LS	2	√	√				$571						$571
3	Repair Interior Doors and Hardware	15	1	$5,917.00	1	LS	2	√					$5,917						$5,917
4	Paint Walls and Ceilings	7	1	$1.25	18,850	SF	3	√						$23,563					$23,563
					SECTION SUBTOTALS =								$6,977	$23,563					$30,539
					INTERIORS TOTALS =							$0	$6,977	$23,563	$0	$0	$0	$0	$30,539
D. SERVICES																			
D10 Conveying																			
	No Maintenance Expenditures are Forecasted																		
					SECTION SUBTOTALS =														$0
D20 Plumbing																			
1, 2, 3	Domestic Water Preventive Maintenance	NA	NA	$500.00	1	YR	Varies	√					$500	$500	$500	$500	$500	$500	$3,000
4, 5, 6	Sanitary Waste and Vent Preventive Maintenance	NA	NA	$500.00	1	YR	Varies	√					$500	$500	$500	$500	$500	$500	$3,000
					SECTION SUBTOTALS =								$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$6,000
D30 HVAC																			
1	Replace Inoperable PTAC Units	15	1	$1,500.00	13	EA	2		√				$19,500						$19,500
2	Replace Remaining Original PTAC Units	15	2	$1,500.00	4	EA	3		√					$6,000					$6,000
3	Replace Kitchen Exhaust Fan	10	1	$2,752.00	1	EA	2		√				$2,752						$2,752
					SECTION SUBTOTALS =								$22,252	$6,000					$28,252
D40 Fire Protection																			
1	Replace Exit Signs	15	1	$203.00	12	EA	2		√				$2,436						$2,436
2	Install fire Extinguishers	10	0	$75.00	10	EA	1		√			$750							$750
3, 4	Annual Servicing/Testing of Fire Extinguishers	NA	NA	$500.00	1	YR	Varies	√					$500	$500	$500	$500	$500	$500	$3,000
5	Replace Fire Alarm System	20	0	$1.50	15,913	SF	1		√			$23,870							$23,870
					SECTION SUBTOTALS =							$24,620	$500	$500	$500	$500	$500	$500	$27,620
D50 Electrical																			
1, 2	Electrical Preventative Maintenance	NA	NA	$0.15	15,913	SF	Varies	√					$2,387			$2,387			$4,775
3	Replace Lighting Fixtures	20	1	$215.00	25	EA	2		√				$5,375						$5,375
					SECTION SUBTOTALS =								$7,762			$2,387			$10,150
					SERVICES TOTALS =							$24,620	$31,514	$7,500	$1,500	$3,887	$1,500	$1,500	$72,021

SIX YEAR MAINTENANCE FORECAST
Engine Company No.12
2225 5th Street NE
Washington, D.C. 20002

	ITEM	EUL	RUL	Unit Cost	Quantity	Unit of Measurement	Priority	Repair / PM	Replace	A/E Serv.	GC Allow.	Immediate	2010 Year 1	2011 Year 2	2012 Year 3	2013 Year 4	2014 Year 5	2015 Year 6	TOTAL
												Priority 1	Priority 2	Priority 3				Priority 4	
E. FURNISHINGS & EQUIPMENT																			
E10 Equipment																			
	No Maintenance Expenditures are Forecasted																		
E20 Furnishings																			
	No Maintenance Expenditures are Forecasted																		
					SECTION SUBTOTALS =														$0
					FURNISHINGS & EQUIPMENT TOTALS =							$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION & DEMOLITION																			
F10 Special Construction																			
	No Maintenance Expenditures are Forecasted																		$0
					SPECIAL CONSTRUCTION & DEMOLITION TOTALS =							$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																			
G10 Site Systems																			
1	Repair Concrete Pavement	25	1	$1,980.00	1	LS	2	√					$1,980						$1,980
2	Repair Metal Gates	20	1	$2,419.00	1	LS	2	√					$2,419						$2,419
					SECTION SUBTOTALS =								$4,399						$4,399
					BUILDING SITEWORK TOTALS =							$0	$4,399	$0	$0	$0	$0	$0	$4,399
H. ACCESSIBILITY																			
H10 Accessibility																			
1	Install Accessible Parking Stall	NA	NA	$250.00	1	EA	2	√					$250						$250
2	Modify Stair Handrails	NA	NA	$20.00	54	LF	2	√					$1,080						$1,080
3	Install Lever-Type Door Hardware	NA	NA	$250.00	11	EA	2		√				$2,750						$2,750
4	Install Interior Accessible Signage	NA	NA	$0.15	15,913	SF	2	√					$2,387						$2,387
5	Reconfigure and Remodel Restroom	NA	NA	$75.00	64	SF	2	√					$4,800						$4,800
6	Replace Drinking Fountain	NA	NA	$950.00	1	EA	2		√				$950						$950
					SECTION SUBTOTALS =								$12,217						$12,217
					ACCESSIBILITY TOTALS =							$0	$12,217	$0	$0	$0	$0	$0	$12,217
I. HAZARDOUS MATERIALS																			
1	Perform Phase 1 Environmental Site Assessment	NA	NA	$10,000.00	1	LS	2			√			$10,000						$10,000
					SECTION SUBTOTALS =								$10,000						$10,000
					HAZARDOUS MATERIALS TOTALS =							$0	$10,000	$0	$0	$0	$0	$0	$10,000
J. ENVIRONMENTAL ANALYSIS																			
J10 LEED Analysis																			
1	LEED Assessment, Document Preparation and Submission	NA	NA	$30,000.00	1	LS	2			√			$30,000						$30,000
					SECTION SUBTOTALS =								$30,000						$30,000
J20 Green Roof Feasibility																			
1	Install Green Roof	NA	NA	$12.00	6,900	SF	2			√			$82,800						$82,800
					SECTION SUBTOTALS =								$82,800						$82,800
J30 Energy Efficiency																			
1	Install Water Saving Plumbing Fixtures	NA	NA	$225.00	20	EA	2		√				$4,500						$4,500
					SECTION SUBTOTALS =								$4,500						$4,500
					ENVIRONMENTAL ANALYSIS TOTALS =							$0	$117,300	$0	$0	$0	$0	$0	$117,300
	TOTALS											$24,620	$278,807	$31,563	$2,000	$4,387	$2,000	$2,000	$345,377
	TOTALS (w/ Inflation @ 4%)											$24,620	$278,807	$32,825	$2,163	$4,935	$2,340	$2,433	$348,122

Total Expenditures (current $) **$345,377**

Appendix C
Photographs

Photograph No. 1

Front elevation facing 5thStreet, SE with three doors to apparatus bay, and gate to surface parking at right

Photograph No. 2

Site viewed from northwest, from across Rhode Island Avenue. Note side gate to parking and access to apparatus bay.

Photograph No. 3

Site viewed from rear (southeast), site's pre-cast concrete wall, and rear of building (with two-bay addition).

Photograph No. 4

Stone ballasted BUR upper roof and modified SBS BUR lower roof on the two bay addition and stair tower.

Photograph No. 5

Upper and lower roofs, with rear concrete-paved surface parking area beyond.

Photograph No. 6

Apparatus bay interior

Photograph No. 7

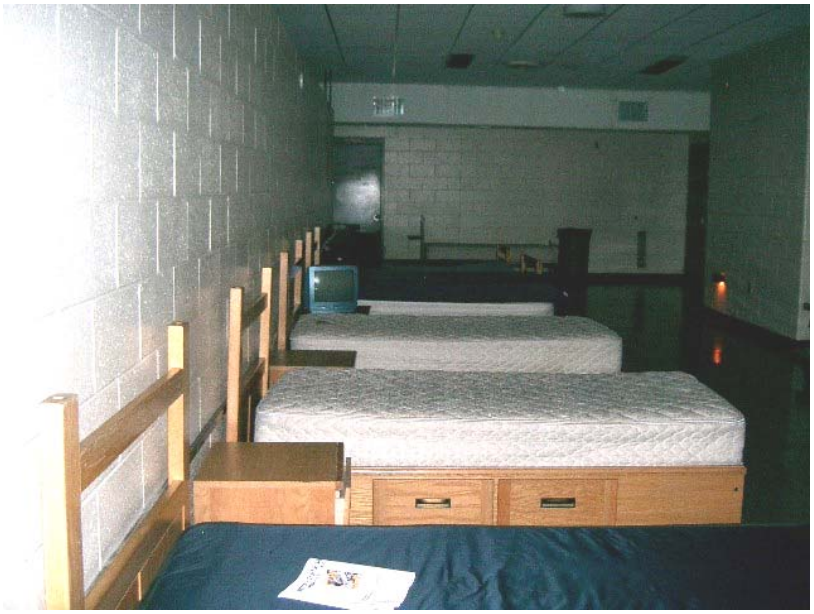
Apparatus bay interior looking toward the two-bay expansion.

Photograph No. 8

Two bay apparatus bay expansion

Photograph No. 9

General office with PTAC unit



Photograph No. 10

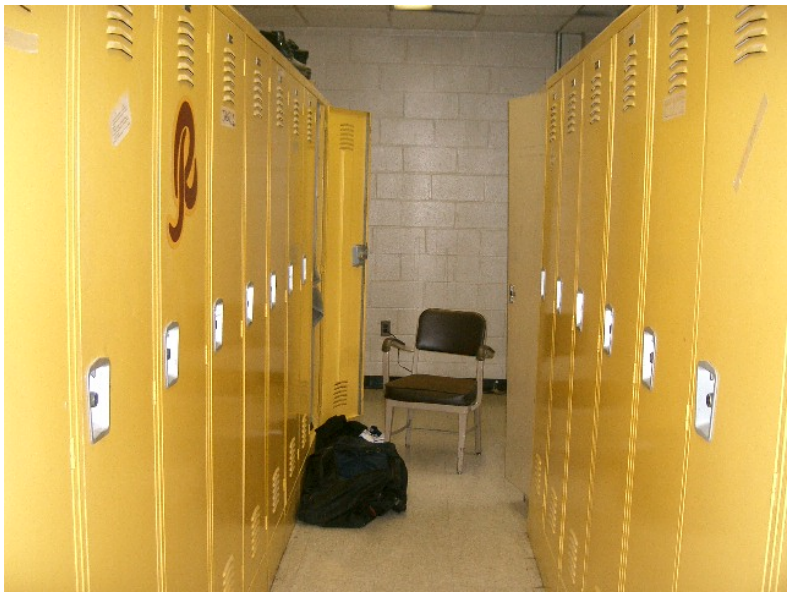
Dormitory on second floor

Photograph No. 11

Men's 2nd Floor Restroom Lavatories

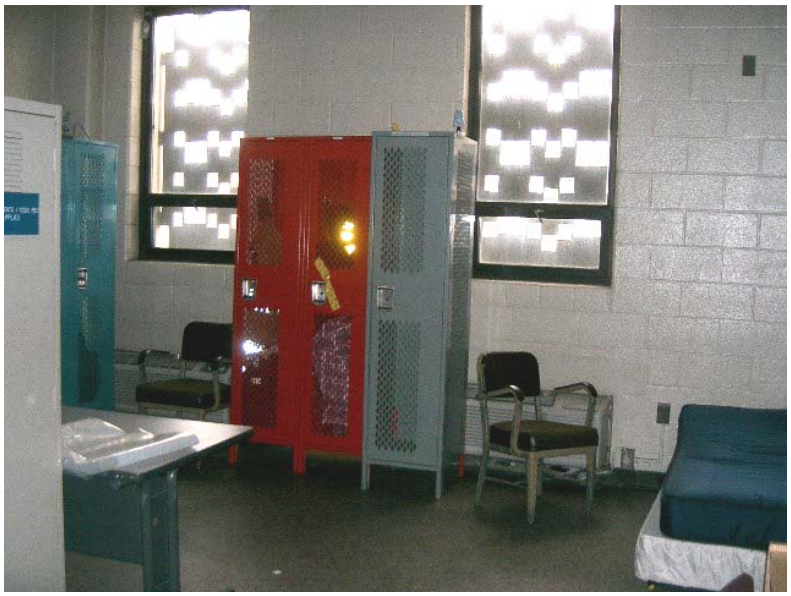
Photograph No. 12

Men's 2nd Floor Restroom Toilet Stalls



Photograph No. 13

2nd Floor Men's Locker Room



Photograph No. 14

Semi-private Officer's Quarters on 2nd Floor, with PTAC units.

Photograph No. 15

Exercise Room on Second Floor

Photograph No. 16

First Floor's Community Dining Room.

Photograph No. 17

Kitchen in the Community Dining Room.

Photograph No. 18

First Floor Water Heater in Janitor's Closet

Photograph No. 19

Water Heater in Second Floor Mechanical Room

Photograph No. 20

Pad-mounted Electrical Transformer in the Rear Parking Area

Photograph No. 21

Emergency Generator

Photograph No. 22

Main Electrical Room with Main Service Switchboards and Sub-panels

Photograph No. 23

Exposed Wiring at Sub-panel in the Second Floor Mechanical Room

Photograph No. 24

Typical rear addition's exit sign, emergency lighting, fire alarm pull station and horn, and panic-type door hardware; exit door was not operable on date of assessment due to damaged hardware.

Photograph No. 25

Rooftop Split HVAC System Condenser

Photograph No. 26

Second Floor Split HVAC System Air Handling Unit

Photograph No. 27

Residential washer and dryer in second floor mechanical room

Photograph No. 28

Commercial washer and dryer on first floor

Photograph No. 29

Stained ceiling tiles at 2nd floor sleeping quarters.

Photograph No. 30

Rhode Island Avenue NE entrance drive (with gates) to rear parking area and apparatus bays

Photograph No. 31

Concrete drive from 5th Street, NE to apparatus bay doors (viewed from roof)

Photograph No. 32nce

Looking toward 5th Street NE beyond, with visitor's parking area and entrance to the rear parking area.

Photograph No. 33

Concrete paved rear parking area, with two-bay addition at left; note the pre-cast concrete perimeter wall.

Photograph No. 34

Metal rolling gates at the Rhode Island Avenue NE parking lot entrance requiring repair.

Photograph No. 35

Rhode Island Avenue NE building elevation, with site's area without grass or landscaping used for visiting fire truck parking.

Photograph No. 36

Perimeter seal damaged at the operable sash of an exterior window.

Photograph No. 37

Area of recent roofing repair adjacent to split HVAC system condensing unit.

Photograph No. 38

Second floor storage room ceiling below the roof drain shown in Photograph No. 37.

Photograph No. 39

First floor stairwell exit door partially obstructed by lockers.

Photograph No. 40

Damaged pre-cast concrete panels at the side of the building.

Photograph No. 41

Vehicle exhaust extraction system fan mounted at the side of the building.

Photograph No. 42

Overhead vehicle exhaust extraction system with flexible ducts for attachment to vehicle tailpipes.

Appendix D
Inventory & Checklist

FAITHFUL+GOULD

System	Detail	Yes / No	Comment
Foundation	Settlement, alignment changes or cracks	No	
	Moisture penetration	No	
	Surface material deterioration	No	
	Openings deterioration	No	
Basement	Cracking or arching	NA	
	Wall deterioration / seepage	NA	
	Inadequate ventilation	NA	
Superstructure	Overall alignment	Good	
	Deflection	No	
	Surface condition – cracks	No	
	Scaling, spalls, and pop-outs	No	
	Stains	No	
	Exposed reinforcing	No	
	Type		CIP and pre-cast concrete
	Loading capacity		Unknown
Building Exterior	Overall appearance	Good	
	Paint or surface treatment	Fair	Pre-cast concrete bands peeling
	Caulking	Fair	Dried, cracking
	Windows and doors fittings	Good	
	Flashing conditions	Good	
	Hardware conditions	Fair	
	Material integrity	Good	
	Cracks	Yes	Pre-cast concrete panels damaged by vehicles
	Evidence of moisture	No	
	Construction joints	Fair	Dried, cracking sealant
	Pointing of brick and stone works	NA	
	Paving (walks and steps)	Yes	
	Type of paving		Concrete
	Handicap accessibility	Yes	
	Railings	NA	
	Exterior lighting	Yes	Wall-mounted
	Peeling paint	Yes	Pre-cast concrete bands
	Stains	Yes	Minor
	Dislocation	No	
	Roof ventilators	No	
Roofing	Water tightness (evidence of leaks)	Yes	Around recently repaired roof drain
	Standing water	No	
	Roofing surface (blisters, wrinkles, cracks, holes, tears, alligatoring, fish mouths,	No	Gravel-surfaced BUR & Modified SBS

System	Detail	Yes / No	Comment
	ballast)		
	Insulation	Yes	In BUR system
	Flashing (deterioration, holes or damages, open joints)	No	
	Drainage (alignment, corrosion)	No	
	Parapets	Yes	Wall extensions
	Downspouts & gutters	No	
	Type of roofing	BUR	
	Drains, downspouts – Nos. & size	Yes	6 – 10" dia. Drains; interior leaders
	Loading limits	Unknown	
	Roof Top Equipment	Yes	Condensing unit and exhaust fans
Building Interior	Floors, walls and ceilings (stains, holes, tears, etc.)	Fair	Tile ceiling stains, VCT and ceramic tile damage
	Restrooms	Yes	
	Stairwells	Yes	One
	Surface damage (missing tiles and floor coverings)	Yes	Stained & missing ceiling tiles; deteriorated VCT and ceramic tile
Site	Paving (walks and driveways)	Concrete	
	Fountains	NA	
	Parking (number of spaces & areas)	Approx. 24	Not marked/striped
	Fences	No	Pre-cast concrete walls
	Transformers	Yes	1 pad-mounted
	Underground storage tank	No	
Mechanical / Plumbing	Leaks, dripping, running faucets and valves	No	
	Pipe insulation	Yes	
	Hangers, supports and clamps	Good	
	Drain and waste connections	Good	
	Adequate flow	Yes	
Mechanical / HVAC	Condition of motors, fans, drive assembly and pumps – rust and corrosion	Good	
	Wiring and electrical controls	Good	
	Thermal insulation	Fair	
	Air cooled condensers	Yes	Rooftop
	Compressors	Good	2008 installation
	Air distributors		Ductwork
	Supply and return ducts – corrosion, cracks and air	No	

System	Detail	Yes / No	Comment
	leaks		
	Burner assembly	NA	
	Dampers, louvers and grilles	Yes	
	Heating and cooling capacity	Fair	Many PTAC units not operating; insufficient cooling
	Exhaust system	Yes	
	Air intake system	Yes	
	No. of Window Air Conditioning Units	None	
Electrical Service and Distribution	Transformer arching or burning	No	
	Exposed wiring	Yes	Panel missing cover in mechanical room
	Missing breakers	No	
	Panel – marked	No	Most not marked
	Incoming conduits – marked	No	
	Panel schedule	No	
	Emergency generator	Yes	Exterior
	Auto start and switch over	Yes	
	Cooling and exhaust	Good	
	Exit signs	Yes	Minimal
	Emergency lighting	Yes	
	Public address system	Yes	
Conveying System (elevators and escalators)	Overall appearance	NA	
	Door operation		
	Control systems		
	Noise		
	Code compliance		
	Handicap access		
	Carriage lighting		
	Signage		
	Floor alignment		
Fire Resistive Requirements	Exterior bearing walls	Yes	CMU with concrete frame
	Interior bearing walls	No	
	Exterior non bearing walls	No	
	Structural frame		Concrete
	Permanent partitions	Yes	CMU and meta; studs/drywall
	Shaft enclosures	CMU	
	Floor & ceiling / floor	Concrete	
	Exterior doors & windows		Metal panel and storefront doors; thermal glazed windows with aluminum framing
	Stairway construction		CMU walls, concrete treads, risers, landings; metal railings

System	Detail	Yes / No	Comment
Fire Alarm Required	Provided	Yes	Appears inoperable
Draft Stops	Provided	Yes	
Doors (Analyze doors for ratings in area separations, occupancy separations, and rated exitways)	Number	12 Exterior	
	Size		See Schedule in Report Section B20, Exterior Closure
	Sealant – Type and LF	Urethane type	772 LF, doors & windows
	Glazing	Thermal pane	Tinted
	Location		Front, rear and side
	Type		Sectional overhead, bifold, swing types
	Hardware		Operators on apparatus bay doors; closers, cylindrical locksets,
Windows	Number		23
	Size		37” x 71.5”
	Sealant – Type and LF	Urethane type	772 LF, doors & windows
	Glazing		Two ¼” panes, tinted
	Location		All facades
	Type		Fixed and hopper sash
	Hardware		Hand latches
Access Control	Card Reader	No	
	Type of access control		Number keypad locksets
	X-Ray machine	No	
	Interior Cameras	No	
	Exterior Cameras, Location	No	
	Intrusion Detection Systems	No	
	Emergency Call Boxes	No	
Fire Stops	Provided	Yes	
Exits (From Building)	Number Required	4	
	Number Provided	4	
	Distance Required	59’ max	
	Distance Provided	<50’	
	Width Required	36” each	
	Width Provided	36” each	Exterior exit from stairwell partially obstructed by lockers
Fire Extinguishers	Number Provided	1 – 2	
	Number Required	10	

System	Detail	Yes / No	Comment
Automatic Fire Suppression System	Provided	No	
	Required	No	
ACCESSIBILITY			
Public Access	Accessible Parking	No	None provided
	Floor or Ground Surfaces	Yes	
	Curbs / ramps	Yes	
	Elevators	NA	
	Stairways including Treads, Risers, Nosing and Handrails	No	Risers +8", treads 10"; railing not continuous, no extensions
Entry Doors and Doorways	32" Clear opening	Yes	
	Clearances	Yes	
	½" Maximum height threshold	Yes	
	Door hardware (lever type)	Yes	Main Entry Door
	Door – opening force	Yes	
Toilet Rooms	Wheelchair Turning Space	No	
	Water Closets & Toilet Compartments Including Location, Clearances, Height, Size & Accessories	No	
	Grab Bars (42" long on side wall, 24" long on back wall)	No	
	Urinals (17" max)	No	
	Lavatories and Sinks (34" Max. high)	No	
Drinking Fountains	Clearances	No	
	Spout Height (36")	No	
Alarms	Audible Alarms	Yes	Inoperable system
	Visual Alarms	No	
Signage	Signs	No	

Project Name/Address: Engine # 12, 2225 5th Street NE, Washington, D.C. 20002

Mechanical Equipment List

Equipment Type/Use	Model Name/No.	Serial No.	Manufacturer's Name	Capacity/Rating	Installation Date	Comments
(17) Package Terminal AC (PTAC) Units	PTDE0902GAA	NA	Trane	9,300 BTU/H Cooling 11,900 BTU/H Heating	1987	Reportedly, 60% to 70% of PTAC Units are not operating
Split System Rooftop Condensing	38ARZ012-601	2807G30197	Carrier	10-Tons	2008	Cooling provided not adequate
Split System Indoor Air-Handling Unit	40RM-012-B611HC	288U12999	Carrier	10-Tons	2008	2nd floor Mechanical Room
(4) Gas-fired Infrared Heaters	Not Legible	Not Legible	Space Ray	Not Legible	Various	Overhead at apparatus bay doors
(6) Electric Unit Heaters	Not Indicated	Not Indicated	Not Indicated	Not Indicated	1987	Overhead at apparatus bay doors
(1) Electric Fan-coil Unit	Not Indicated	Not Indicated	Not Indicated	Not Indicated	1987	1st floor Stairwell
(5) Rooftop Exhaust Fans	Not Indicated	Not Indicated	Not Indicated	Not Indicated	1987	Restrooms, locker rooms, mechanical rooms, electrical rooms
(1) Sidewall Exhaust Fan	Not Indicated	Not Indicated	Not Indicated	Not Indicated	1987	Kitchen; not operble

Project Name/Address: Engine # 12, 2225 5th Street NE, Washington, D.C. 20002

Plumbing Equipment List

Equipment Type/Use	Model Name/No.	Serial No.	Manufacturer's Name	Capacity/Rating	Installation Date	Comments
Electric Domestic Water Heater	M 1180	2A221871	Bradford White	119-Gallons	Est. 2000	1st Floor Janitor's Closet
Electric Domestic Water Heater	Not Legible	Not Legible	Bradford White	119-Gallons	Est. 2000	2nd Floor Mechanical Room
Commercial Washer	UW60P2OU1001	MO499145672	Unimac	60#	Date Code: 0499	Sticker indicates serviced by Haynes
Commercial Dryer	Unknown	Unknown	Unimac	Approx. 100#	Approx. 1993	Sticker indicates serviced by Haynes

Project Name/Address: Engine # 12, 2225 5th Street NE, Washington, D.C. 20002

Electrical Equipment List

Equipment Type/Use	Model Name/No.	Serial No.	Manufacturer's Name	Capacity/Rating	Installation Date	Comments
Panel HM	Type NHB	Style 3	General Electric	277/480-Volts 200 Amps	1987	2nd Floor Mechanical Room; No Directory
Panel (Unlabled)	Type NLAB	Style 5	General Electric	208/120-Volts 100-Amps	1987	2nd Floor Mechanical Room
Panel LB1	Type NLAB	Style 5	General Electric	208/120-Volts 200-Amps	1987	2nd Floor Mechanical Room
Panel LB	Type NLAB	Style 5	General Electric	208/120-Volts 100-Amps	1987	2nd Floor Mechanical Room
Panel FM	Type NLAB	Style 5	General Electric	208/120-Volts 100-Amps	1987	1st Floor Electrical Room
Panel LE1	Type NLAB	Style 5	General Electric	208/120-Volts 30-Amps	1987	1st Floor Electrical Room; No Directory
Panel LE2	Type NLAB	Style 5	General Electric	208/120-Volts 100-Amps	1987	1st Floor Electrical Room
Main Switchboard	182-59578	NA	General Electric	208/120-Volts 1,600-Amps	1987	1st Floor Electrical Room; 2 Sections
Transformer TM	9T23B3808	F	General Electric	300 KVA	1987	1st Floor Electrical Room
Panel LA1	Type NLAB	Style 2	General Electric	208/120-Volts 100-Amps	1987	1st Floor Electrical Room; No Directory
Panel LA	Type NLAB	Style 5	General Electric	208/120-Volts 200-Amps	1987	1st Floor Electrical Room
Panel HM1	Type NHB	Style 3	General Electric	480/277-Volts 400-Amps	1987	1st Floor Electrical Room
Panel (Unlabled)	NA	NA	Cutler Hammmer	120/208-Volts 100-Amps	Est. 2003	Addition's Apparatus Bays
Switch HM	NP266240-B	NA	General Electric	400-Amps	1987	1st Floor Electrical Room
Switch TX	NA	NA	Cutler Hammer	200-Amps	1987	1st Floor Electrical Room
Emergency Generator Automatic Transfer Switch	MN0102-1	3556	Generac	120/208-Volts 105-Amps	2002	1st Floor Electrical Room
Fire Alarm Panel	Type 2001-3081	U70641	Simplex	4-Zone	1987	1st Floor Electrical Room
Emergency Generator	2594100300	2068918	Generac	30 KW 38 KVA	2002	2000 Series; diesel fuel tank in base

Appendix E

Preventative Maintenance Recommendations

FAITHFUL+GOULD

1.0. PM PROCEDURE NUMBER

1.1. Core 1 Split System Quarterly PM

2.0. GENERAL DESCRIPTION

2.1. Split A/C System (Various Manufacturers)

3.0. MATERIAL REQUIRED

3.1. Filters
3.2. Spare V-belts
3.3. Self-sealing quick disconnect refrigerant hose fittings, if applicable.
3.4. Approved refrigerant.

4.0. EQUIPMENT REQUIRED

4.1. Hand tools
4.2. Grease guns and oilers
4.3. Refrigeration gauges
4.4. Leak detector-electronic or halogen
4.5. Pocket thermometer
4.6. Clamp on meter (volt - ohm - amp meter)
4.7. Packing kit and packing
4.8. Vacuum cleaner.
4.9. Fin comb
4.10. Refrigerant recovery/recycling unit, if applicable.
4.11. EPA/DOT approved refrigerant storage tanks.
4.12. Electronic leak detector.

5.0. POWER REQUIRED

5.1. Standard electrical power outlet

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE).

6.2. WARNING: Lockout / Tag out procedures must be followed prior to servicing equipment.

6.3. Obtain and review manufacturer's instructions. Follow manufacturer’s instructions or procedures if different to these instructions or procedures.

6.4. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.

6.5. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.

6.6. Whenever refrigerant is added or removed from equipment, record the quantities.

6.7. Recover, recycle, or reclaim the refrigerant as appropriate.

6.8. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal.

6.9. If materials containing refrigerants are discarded, comply with EPA regulations as applicable.

6.10. Refrigerant oils to be removed for disposal must be analyzed for hazardous waste and handled accordingly.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Material safety data sheets (MSDS)

7.2. Manufacturer's manuals

8.0. PREVENTIVE MAINTENANCE PROCESS

8.1. Check all electrical connections for tightness/overheating.

8.2. Verify proper operation of compressor and condenser fan (amp draw).

8.3. Check/clean condenser coil as required.

8.4. Check all flared refrigerant connections for leakage.

8.5. Clean indoor unit air filter.

8.6. Verify proper operation of indoor unit.

8.7. Thoroughly inspect and clean interior and exterior of machine with vacuum (remove panels).

8.8. Clean drain pan and note excessive corrosion. Treat rusted areas with rust inhibitor. Ensure that the rust inhibitor chemical does not add volatile organic compounds or contaminants to the drain pan. If possible, rinse well after application or choose a less hazardous material. Consult the chemicals Material Safety Data Sheet (MSDS) for this information.

8.9. Chilled water units:

8.9.1. Check for chilled water leaks on all lines, valves, strainers, coils, etc. If leaks are not able to be stopped or corrected, report leak status to supervisor.

8.9.2. Clean strainer on chilled water unit.

Direct expansion units:

8.9.3. Check for refrigeration leaks on all lines, valves, fittings, coils, etc., using a halogen leak detector or similar testing device. If leaks are not able to be stopped or corrected, report leak status.

8.10. Check condition of cooling and reheat coils. Use fin comb if need to straighten fins.

8.12. Drain and clean humidifier pan or pad, whichever applies. Replace pad if required. Remove corrosion as needed.

8.13. Clean and lubricate motor and squirrel cage fan(s). Check alignment of motor and fan. Check bearings for excessive wear.

8.14. Check belt tension and condition. Adjust or replace as required.

8.15. Replace pre-filters if needed.

8.16. Replace final filter if needed.

8.17. Run machine, check action of controls, relays, switches, etc., to see that:

8.17.1. Chilled water units:

8.17.1.1. Chilled water valve(s) are operating properly.

8.17.1.2. Reheat coils activate properly.

8.17.1.3. Humidistat activates humidifier.

8.17.1.4. Valves regulating water pressure are proper on cooling.

8.17.1.5. Discharge air temperature is set properly.

8.17.1.6. Check and record chilled water inlet and outlet temperatures.

8.17.2. Direct expansion units:

8.17.2.1. Humidistat activates humidifier.

8.17.2.2. Reheat coils activate properly.

8.18. Discharge air temperature is set properly.

8.19. Check and adjust vibration eliminator mountings if equipped. Repair or replace if required.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created: F+G 3-3-09

1.0. PM PROCEDURE NAME

1.1. OJS Exhaust Fan Quarterly PM

2.0. GENERAL EQUIPMENT DESCRIPTION

2.1. Exhaust Fan, Direct and Belt Driven (Various Manufacturers)

3.0. MATERIAL REQUIRED

3.1. Mobil EP2 grease or equivalent

4.0. EQUIPMENT REQUIRED

4.1. Hand tools

4.2. Hand grease gun

5.0. POWER REQUIRED

5.1. Standard Power Outlet

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE

6.2. WARNING: Lockout / Tagout procedures must be followed prior to servicing equipment.

6.3. Obtain and review manufacturer's instructions. Follow manufacturer's instructions or procedures if different to these instructions or procedures.

6.4. NOTE 1: The following procedures are intended to be suitable to perform preventive maintenance on a variety of exhaust fan designs, including belt-driven, direct motor driven, with a variety of fan types and mounting styles.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Material Safety Data Sheets (MSDS)

7.2. Manufacturer's Manuals

8. PREVENTIVE MAINTENANCE PROCESS

8.1. All Exhaust Fans:

8.1.1. Observe fan during operation to check for excessive vibration or operating noise. Correct any discrepancies observed or place equipment out of service if failure and possible damage appear imminent.

8.1.2. Check that mounting fasteners are secure and free of corrosion.

8.1.3. Check electric service conduits and switches for damage.

8.1.4. Remove covers as necessary to inspect fan for corrosion damage, wear, or accumulation of process materials. Clean any accumulation of process materials or corrosion if present.

8.1.5. Check inlet duct for damage and effectiveness of seal and that rain collar is installed properly.

8.1.6. Check exhaust outlet and/or stack for proper sealing and that bird screens are installed and properly secured. On vertical stacks, inspect the guy wires for proper adjustment and that they are securely fastened to roof.

8.1.7. Check motor for presence of grease zerks. Apply grease if so equipped. Use Mobil EP2 grease (MRO# 40-0520).

8.2. Horizontal shaft belt driven fans:

8.2.1. Remove necessary covers to expose belts and sheaves. Examine belts for wear and all components for proper alignment and absence of visible wear. Correct any discrepant conditions.

8.2.2. Lubricate any pillow block bearings which have grease zerks using Mobil EP2 grease (MRO# 40-0520).

8.3. Vertical shaft fans and direct drive fans:

8.3.1. Check motor to fan coupling for damage or wear.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created : F+G 3-3-09

1.0. PM PROCEDURE NAME

1.1. DMV Condensing Unit Quarterly PM

2.0. GENERAL EQUIPMENT DESCRIPTION

2.1. Condensing Unit (Various Manufacturers)

3.0. MATERIAL REQUIRED

3.1. Non-detergent oil

4.0. EQUIPMENT REQUIRED

4.1. Hand tools
4.2. Air duster
4.3. High pressure washer
4.4. Fin comb
4.5. Refrigerant recovery/recycle unit

5.0. POWER REQUIRED

5.1. Standard Power Outlet

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE).

6.2. WARNING: Lockout / Tagout procedures must be followed prior to servicing equipment.

6.3. Review standard operating procedures for controlling hazardous energy sources.

6.4. Review standard operating procedures for selection, care, and use of respiratory protection.

6.5. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.

6.6. Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms.

6.7. Recover, recycle, or reclaim the refrigerant as appropriate.

6.8. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the equipment.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Lockout / Tagout Procedure
7.2. Material Safety Data Sheets (MSDS)
7.3. Manufacturer's Manuals

8.0. PREVENTIVE MAINTENANCE PROCESS

8.1. Check fan motor and fan blade for cleanliness and lubrication. Clean and lubricate bearings, as necessary.

8.2. Check motor for proper amperage load

8.3. Clean condenser with a vacuum

8.4. Check electrical connections for tightness and control and for proper operation.

8.5. Check for signs of contactor or relay arcing.

8.6. Check to see that power and ground connections remain secure.

8.7. Inspect unit coils and clean fins, if necessary, with cold water and compressed air.

8.8. Check refrigerant charge pressures

8.9. Check for corrosion.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created: F+G 3-3-09

1.0. PM PROCEDURE NAME

1.1. Engine 12 Air Handling Unit Quarterly PM

2.0. GENERAL EQUIPMENT DESCRIPTION

2.1. Air Handling Units (Trane)

3.0. MATERIAL REQUIRED

3.1. Filters

3.2. Belts

4.0. EQUIPMENT REQUIRED

4.1. Hand tools

5.0. POWER REQUIRED

5.1. N/A

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE).

6.2. WARNING: Lockout / Tag out procedures must be followed prior to servicing equipment.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Manufacturer's Manuals

7.2. Lockout / Tagout Procedure

7.3. Material Safety Data Sheets (MSDS)

8.0. PREVENTIVE MAINTENANCE PROCESS

8.1. Check fan bearings for unusual noise and excessive bearing temperature.

8.2. Lubricate fan and motor bearings.

8.3. Check electrical components and wiring for evidence of overheating. Check wiring connections for tightness.

8.4. Check float switches for proper operation.

8.5. Observe fan motors in operation for noises which may indicate a problem or possible failure.

8.6. Check belts to fan units for proper adjustment and alignment and for wear. Replace belts if required.

8.7. Inspect the control valves for leaks and proper operation.

8.8. Clean blow-down strainers.

8.9. Check and replace disposable filters if required.

8.10. Check pressure gauges for proper operation.

8.11. Check Magnehelic gauge sensor lines and zero the Magnehelic gauge.

8.12. Record CFM reading.

8.13. Check condensate drain for obstructions and clear if necessary.

8.14. Check duct connections for proper sealing.

8.15. Check CW coils for build-up of dirt which interferes with air flow.

8.16. Check fan wheels and shaft for corrosion or build-up of dirt. Clean if required.

8.17. Check dampers, linkage, and operators for proper function. Clean as necessary.

8.18. Check door gaskets and repair/replace as required to ensure sealing of unit.

8.19. Check for corrosion.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created: F+G 3-3-095

1.0. PM PROCEDURE NAME

1.1. Engine 12 Domestic Water Heater Monthly Mechanical PM

2.0. GENERAL EQUIPMENT DESCRIPTION

2.1. Domestic Water Heater, Gas Fired (Various Manufacturers)

3.0. MATERIAL REQUIRED

3.1. Honeywell aquastat
3.2. Spark plug
3.3. Ceramic insulator
3.4. Bearings
3.5. Lubricant
3.6. Mechanical seal
3.7. Boiler chemicals as directed by competent water treatment company

4.0. EQUIPMENT REQUIRED

4.1. Hand tools
4.2. Calibrated temperature pressure gauge
4.3. Automatic pressure reducing regulator
4.4. Tubing cutters
4.5. Small acetylene outfit
4.6. Combustion testing equipment
4.7. Hydrostatic pump and safety valve gag
4.8. Vacuum cleaner wet/dry type

5.0. POWER REQUIRED

5.1. Standard Electrical Power Outlet

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE).

6.2. WARNING: Lockout / Tagout procedures must be followed prior to servicing equipment.

6.3. Obtain and review manufacturer's instructions. Follow manufacturer’s instructions or procedures if different to these instructions or procedures. Obtain and review ASME Boiler and Pressure Vessel Codes for boilers.

6.4. Review Standard Operating Procedures for Controlling Hazardous Energy Sources.

6.5. If materials to be worked on are known or suspected to contain asbestos, check the building's asbestos management plan to see if they have been tested for asbestos. If they are suspect but have not been tested, have them tested. Manage asbestos in accordance with the plan.

6.6. Account for all tools and materials before closing boiler.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Lockout / Tagout Procedure
7.2. Material Safety Data Sheets (MSDS)
7.3. Manufacturer’s Manuals
7.4. ASME Boiler and Pressure Vessel Codes

8.0. PREVENTIVE MAINTENANCE PROCESS

8.1. Check all natural gas lines for leakage around valves and fittings.

8.2. Check that all valves operate properly and are leak free.

8.3. Check all water tank plumbing for leaks, corrosion, and/or alkali build-up. Replace gaskets, seals and/or bolts where needed.

8.4. Clean or flush all sediment or scale deposits from hot water storage tank.

8.5. Check/adjust the pilot. The main burner should light smoothly from pilot and burn with a blue flame with a minimum of yellow tips.

8.6. Visually check main burner for plugged orifices and proper flame adjustment. Clean orifices and/or adjust for a blue flame, void of yellow tips if necessary.

8.7. Check the safety relief valve and associated discharge piping for proper operation an installation.

8.8. Check that any temperature gages are functional and in good repair. Replace any that are not.

8.9. Check any hot water recirculation pumps for excessive vibration, bearing noise, over heating or leakage around seals or fittings.

8.10. Check that all hangers are free of missing or loose fasteners, and are properly supporting piping and equipment.

8.11. Inspect insulation around hot water tank and piping. Replace or repair as necessary.

8.12. Keep thermostat at 120 degrees.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created: F+G 3-3-09

1.0. PM PROCEDURE NAME

1.1. Engine 12 Generator Annual Mechanical PM

2.0. GENERAL EQUIPMENT DESCRIPTION

2.1. Emergency Diesel Generator (Various Manufacturers)

3.0. MATERIAL REQUIRED

3.1. Grease guns and oilers
3.2. Oil and Oil Filters
3.3. Belts

4.0. EQUIPMENT REQUIRED

4.1. Hand tools

5.0. POWER REQUIRED

5.1. Standard Power Outlet

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE).

6.2. WARNING: Lockout / Tagout procedures must be followed prior to servicing equipment.

6.3. Have approved type fire extinguishers readily available.

6.4. Allow no open flame or smoking in area.

6.5. Use safety type fuel cans only.

6.6. Obtain and review manufacturer's instructions. Follow manufacturer's instructions or procedures if different to these instructions or procedures.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Manufacturers Manual
7.2. National Fire Protection Association Form 18-D
7.3. Material Safety Data Sheets (MSDS)

8.0. PREVENTIVE MAINTENANCE PROCESS

8.1. Change fuel filters.

8.2. Inspect and adjust rack on unit injector or fuel distributor pump according to manufacturer's instructions.

8.3. Check governor, adjust for correct speed.

8.4. Determine fuel level, drain water from tank and inspect for contamination. Prior arrangements should be made for local procurement of fuel in emergencies.

8.5. Change engine oil and filter and perform other lubrication on engine and generator.

8.6. Inspect cooling system for leaks, air obstructions, "V" belt tension and proper anti-freeze solution. Make needed adjustments.

8.7. Inspect generator winding and clean if needed.

8.8. Clean commutator and collector rings. Check brush wear and tension in accordance with manufacturer's instructions.

8.9. Inspect generator heaters.

8.10. Remove old oil and diesel fuel from around generator area when maintenance is complete.

8.11. Check tank vents and overflow piping for obstructions.

8.12. Inspect fuel piping.

8.13. Inspect louver motor and controls.

8.14. Inspect exhaust system hangers and supports.

8.15. Inspect transfer switch main contacts.

8.16. Check the ignition system of the engine.

8.17. Clean electrical boxes, panels, and cabinets.

8.18. Check all fuses

8.19. Service the air cleaner for the engine.

8.20. Run the generator with its connected load for 30 minutes.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created : F+G 3-3-09

1.0. PM PROCEDURE NAME

1.1.Engine 12 Fire Alarm Control Panel

2.0. GENERAL EQUIPMENT DESCRIPTION

2.1. Fire Alarm Control Panel

3.0. MATERIAL REQUIRED

3.1. N/A

4.0. EQUIPMENT REQUIRED

4.1. Hand tools

4.2. Multimeter

5.0. POWER REQUIRED

5.1. N/A

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE).

6.2. WARNING: Lockout / Tagout procedures must be followed prior to servicing equipment.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Manufacturer's Manuals

8.0. PREVENTIVE MAINTENANCE PROCESS

8.1. Perform a full functionality, test according to the requirements of NFPA 72 and by the manufacturer's procedure.

8.2. If required, disable audible/visual alarms and air handler shutdowns.

8.3. Clean the system control panel and internal components, so as to be free from debris and dust. Test indicator lamps and switches.

8.4. Inspect the transient suppressors. Lightning protection equipment shall be inspected and maintained per the manufacturer's specifications.

8.5. Back-up batteries shall be tested on a separate PM #, less than annually. Amp hour capacity of batteries shall be recorded and records maintained in accordance with NFPA 72. 10.6.2.1

8.6. Test the fire alarm panel and the twelve remote power supplies for receipt of open battery circuit.

8.7. Test the fire alarm panel and the remote power supplies for loss of AC power.

8.8. Test the NACS for receipt of open circuits.

8.9. Test the NACS for receipt of ground faults.

8.10. Test the loop 1 and loop 2 signal line circuits for receipt of ground faults.

8.11. Test loop 1 and loop 2 signal line circuits for receipt of short circuit faults.

8.12. Test loop 1 and loop 2 signal line circuits for receipt of open circuit faults.

8.13. Test the four node network for an open circuit.

8.14. Panel and power supply locations

8.14.1. FACP and two 55AH batteries G.4-9.5 (break area, east of auditorium)

8.14.2. Three NAC power supplies and six 12 AH batteries, one beam, detector power supply and two 12 AH batteries D.5-6.9 (core, 2)

8.14.3. Three NAC power supplies and six 12 AH batteries, one beam, detector power supply and two 12 AH batteries D.5-10.0 (core, 3)

8.14.4. Three NAC power supplies and six 12 Ah batteries, one beam, detector power supply and two 12 ah batteries d.8-14.3 (Core, 4)

8.15. Verify that troubles are received at fire alarm panel.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created: F+G 3-3-09

1.0. PM PROCEDURE NAME

1.1. Engine 12 Generator Weekly Mechanical PM

2.0. GENERAL EQUIPMENT DESCRIPTION

2.1. Emergency Diesel Generator (Various Manufacturers)

3.0. MATERIAL REQUIRED

3.1. N/A

4.0. EQUIPMENT REQUIRED

4.1. Hand tools

5.0. POWER REQUIRED

5.1. Standard Power Outlet

6.0. SAFETY WARNINGS OR SPECIAL PRECAUTIONS

6.1. Personnel servicing this equipment must use appropriate Personal Protective Equipment (PPE).

6.2. WARNING: Lockout / Tagout procedures must be followed prior to servicing equipment.

7.0. OTHER REFERENCE DOCUMENTS

7.1. Manufacturers Manual
7.2. National Fire Protection Association Form 18-D
7.3. Material Safety Data Sheets (MSDS)

8.0. PREVENTIVE MAINTENANCE PROCESS

8.1. Drain water and sediment from water separator and fuel storage system.

8.2. Top off the fuel tank with number 2 diesel. Take necessary precautions to prevent the entrance of dirt, water, or other contaminates into the fuel system while fueling.

8.3. Check engine oil level and top up if necessary.

9.0. CLEANUP

9.1. Thoroughly clean work area once PM has been completed. Dispose of all waste and contaminated material properly.

10.0. REVISION (Employee, Date, Description)

10.1. Created: C. Bourgoin, 4-6-04
10.2. Rev: Muthart, 7-14-04
10.3. Rev: F+G/VFA, 6-10-08

Appendix F

Scope of Services, Document Review and Limitations

SCOPE OF SERVICES & DOCUMENT REVIEW

Faithful+Gould was requested to complete a Facility Condition Assessment and Space Utilization Study of the site and site improvements of the subject Property. This report was completed with the principal intention of identifying current conditions, recommending corrective actions and developing an occupancy profile to indicate current utilization of occupiable space.

The scope of services for the Facility Condition Assessment included performing a visual assessment of the interior, exterior and site components of the subject Property. The scope of services was governed by Faithful+Gould's revised proposal for Facility Condition Assessment as authorized under Purchase Order 287952 by Ms. Diane B. Wooden of the District of Columbia Construction, Design and Building Renovation Commodity Group on January 3, 2009.

The primary purpose of the Facility Condition Assessment was to identify visually apparent deficiencies in the building and site and to determine the general extent of capital and maintenance projects required to facilitate continued use of the building within its current use type. The evaluation included site visits to observe the building and site systems, interviewing available building management and maintenance personnel, and reviewing available maintenance systems, design and construction documents and plans, and public records.

The primary purpose of the Space Utilization Study was to provide an occupancy profile for the facility to indicate current utilization of occupiable space. This effort included providing an inventory of furnishings and occupants, and producing dimensioned floor plans of each occupied floor.

The Facility Condition Assessment was conducted in general accordance with industry standards and the American Society for Testing and Materials (ASTM) Standard E 2018-08 Standard Guide for Property Condition Assessment: Baseline Property Condition Assessment Process.

The Space Utilization Study was conducted in general accordance with industry standards and standards produced by the General Service Administration's Public Buildings Service and as contained within the ANSI/BOMA Z65.1-1996 Standard Method for Measuring Floor Area in Office Buildings.

Facility Condition Assessment

We performed a visual non-destructive assessment of the interior, exterior and site components of the Property, including the following major components and systems:

1.0 Facility Attributes: During our field evaluation, we collected and verified real estate and certain environmental information in order to prepare an accurate building information system. The information collected included the following:

A. Building address, site location with at least two street references
B. Lot, square and ward numbers
C. Gross square foot area of building and land
D. Assessed building and land values
E. Occupancy status – occupied, vacant or partially occupied
F. Building designation – historic or non-historic
G. Building location – within or not within a historic district
H. Environmental details as provided within OPM supplied checklist

2.0 Condition Assessment: We conducted a condition assessment of the Property. The condition assessment consisted of a detailed on-site evaluation completed to determine or verify and document the condition of all building major systems and components. The condition assessment consisted of the following elements:

A. Collection of Baseline Facilities Data: We conducted a field survey of the Property for the purpose of updating and validating existing architectural floor plans. Updated floor plans are included within the report appendix.

B. Facility Existing Condition Data: We identified the facility status data (i.e. age, historical status, construction type, square footage, materials, user/tenants, and functional areas such as offices, mechanical / electrical rooms, etc.); architectural floor plans; and site plan/general development map data (surface man-made site features, and real estate boundary maps).

C. Condition Assessment Survey: As part of the condition assessment survey we:

i. Provided a description of systems along with manufacturer's name for each major piece of equipment and the estimate age.

ii. Identified the current condition of the facilities and their components. This included a description of the deficiencies indicating what the deficiency is, how much it is, and where it exists.

iii. We provided a description of the recommended corrective measures, the associated cost, the remaining service life of the building component or system if the deficiency is left uncorrected. We specifically included quantitative information on recommended work to include opinions of cost and recommended date of accomplishment. This information was presented within the OPM supplied cost spreadsheets.

iv. We prioritized the criticality of necessary repair, renovation and or replacement with estimated cost forecast by the projected year.

v. We furnished the survey findings in the format supplied to us by OPM.

vi. We quantified deferred maintenance and furnish estimated costs within the format supplied to us by OPM.

vii. We provided an annual preventative maintenance schedule for the installed equipment.

2.1 Drawing and Maintenance Review: We reviewed any available construction documents (plans, specifications, etc.) and maintenance and repair logs prior to visually assessing the buildings. In addition, we interviewed available maintenance personnel to determine the maintenance / repair history, and know defects in each building.

2.2 Included Components: We surveyed the physical components and systems of the identified facilities. These will include the following for:

2.2.1 Substructure: We visually evaluated the condition of the foundation systems, slab-on-grade, basement excavation and walls, and other applicable substructure elements. We evaluated for signs of distress (cracking, displacement, insect infiltration etc.) and have documented and photographed our findings.

2.2.2 Core and Shell: We visually evaluated the condition of the superstructure (floors, bearing walls, columns, beams, roofs and related structures): exterior closure (exterior walls, windows and doors): and roofing systems. The evaluation included assessment of the accessible shell components and ancillary elements for signs of distress and documentation and photographing of our findings. This included cracking, displacement, and connection adequacy, continuity of flashing and seals, and evidence of other types of distress. We also checked for flashing and connections for proper drainage on walls and for the condition and proper placement of expansion joints. When assessing the roofing, we accessed the roofs to visually observe the condition of the system and any accessories and details to include flashings and penetrations. We also documented existing warranties, replacement costs and remaining useful life.

2.2.3 Interiors: We visually evaluated the interior construction (interior partitions, doors and specialties such as toilet accessories, lockers, storage shelving, etc.); stairway and finishes; and interior finishes (paint and other wall finishes, flooring and interior ceiling finishes and systems). The evaluation included documenting and photographing the condition of the interior finishes.

2.2.4 Services: We visually evaluated the condition of the conveyor systems (elevators, and other vertical transportation and conveying systems), plumbing systems (fixtures, domestic water distribution, sanitary waste, rain water drainage and special plumbing systems such as gasoline dispending, compressed air, etc.); HVAC Systems to include heat generation, rejection, distribution and transfer systems; HVAC controls and instrumentations and other HVAC support elements; Fire detection and suppression systems (alarm systems, monitoring systems, sprinkler systems, standpipe and hose systems, pumps, fire protection specialties, and special fire suppression systems); Electrical Systems (service and distribution, feeder type), lighting and branch wiring, communications and security systems, emergency generators, UPS systems, electrical controls and instrumentation, service points, meters and capacities.

For each item of service equipment we visually evaluated the conditions and code compliance of the service and photographed and documented our findings. For the conveying systems (where provided), we reviewed available maintenance records and reports on the equipment and evaluate the performance and anticipated service life of the systems. For plumbing, HVAC and electrical systems, we observed the age, condition and adequacy of the capacity and status of maintenance of these systems and have documented their condition, deficiencies and code violations. We also commented on renovations to the system that would prove beneficial to their overall efficiency or performance, and have stated the estimated expected remaining useful service life of each major piece of equipment with and without repair. For fire and life-safety systems, we listed all major components and identified those systems that require upgrades. Findings were supported with photographs.

2.2.5 Equipment and Furnishings: We evaluated the condition of fixed components of the structure and non-moveable furnishings, office or support equipment. Representative examples include security vaults, commercial laundry equipment, fixed audio-visual equipment, parking control equipment, kitchen and food service equipment, fixed casework and seating etc. For each applicable piece of equipment or furnishing that we visually evaluated, we documented and photographed conditions, and produced a tabulated inventory of the equipment to include rating / capacity, make and manufacturer, year of manufacture, and location.

2.2.6 Other Building Construction: We visually evaluated items of special construction and systems (i.e. special security systems, incinerators, kennels, storage tanks, building automation systems, special purpose rooms etc.).

2.2.7 Building Site Improvements: We evaluated the condition of site improvements to include grading and drainage, slope stabilization, protection and erosion control; roadways and parking lots (pavement, curb, gutter, steps etc.); site development (fences and gates, recreational facilities, exterior furniture, bridges, flag poles, exterior signage etc.); and landscaping (planting, irrigation systems, etc.). For each element we visually evaluated, photographed and documented our findings. For grading and drainage, we observed the site systems for removal of storm water, and identified any areas that appear under-capacity or distressed. We also evaluated the site with respect to flood potential. We reviewed and documented the condition of the pavements, curb and gutter, sidewalks and plazas, retaining walls, fences, signs, landscaping and irrigation systems and will present our finding supplemented with photographs.

2.2.8 Accessibility: We completed an evaluation of the Property to determine compliance with applicable accessibility guidelines. This evaluation included a site review to determine major barriers to access to and into the building, through the building, to restroom facilities, and to other service areas within the building.

2.2.9 Safety / Security: We considered the facility as a whole when completing this evaluation. The evaluation included evaluation of the performance and current ability of lower-level wall / window system with regard to blast shrapnel protection. The evaluation also included a safety and security review to determine and document hazards and needed improvements in all areas of the building and surrounding site.

2.2.10 Access Control: We evaluated, documented and photographed the condition of doors and windows, including hardware and other components; intrusion detection systems; and the access control

system. We also identified a pattern in faulty hardware systems and controls, and have conducted a review of potential points of access and determined and documented the effectiveness of the access control system.

2.2.11 Hazardous Materials: We identified for further analysis building components and stored materials suspected of containing hazardous materials such as asbestos, lead, petroleum products etc.

2.2.12 Equipment List: The report includes an equipment list in tabulated form indicating the make, model, manufacturer's name, capacity / rating and installation date of each principal item of contained equipment.

At the completion of our on-site activities we issued this report of Facility Condition Assessment. The report includes detailed descriptions of installed systems, conditions and recommendations. The report also includes expenditures of anticipated capital and maintenance expenditures required over the next six-years. Expenditures are detailed in the year we recommend that they be completed and are prioritized as follows:

- Priority 1 – Critical (immediate) need that may prevent the continued use of the facility or is required to address issues of life safety and/or code compliance;

- Priority 2 – Potentially Critical (one to two years) need addressing system, equipment or component failure that, if not addressed promptly, may prohibit the continued use of the facility;

- Priority 3 – Necessary (but not yet Critical, three to five years) need that, if left unaddressed, will result in a portion or all of the facility to be unfit for continued use;

- Priority 4 – Recommended (six years and greater) need that represents a good practice improvement or action based on the observed conditions or the expected useful life of the component or system.

The scope of services under which the Facility Condition Assessment was completed was visual in nature and not intended to be destructive to the Property to gain access to hidden conditions. We did not perform any destructive testing or uncover or expose any system members. We have documented the type and extent of visually apparent defects in the systems in order to perform the condition assessment.

The scope of services includes only those items specifically indicated. The evaluation does not include any environmental services such as (without limitation) sampling, testing, or evaluation of asbestos, lead-based paint, lead-in-water, indoor air quality, PCB's, radon, mold, or any other potentially hazard materials, air-borne toxins or issues not outlined in the previous scope of services.

Space Utilization

We completed a space utilization survey to consist of providing an occupancy profile for the facility to indicate current utilization of occupiable space. Pertinent information collected will included:

A floor plan for each facility. The floor plan produced indicates interior dimensions and room areas for each floor. We also calculated the gross floor area versus occupiable (net rentable) area of each individual floor. Our determination of gross floor area and occupiable area was governed by the guidelines and methodology established by the General Service Administration's Public Buildings Service and as contained within the ANSI/BOMA Z65.1-1996 Standard Method for Measuring Floor Area in Office Buildings.

- Building core area, including elevator shafts, toilets, storage area, public corridors, and other support areas

- The location of all walls, partitions, doors, and windows

- Location and size of all occupiable areas and the name of current tenant agency

- Personnel density that includes number of personnel, furniture, files, and equipment in occupied space. This includes submission of the information gathered in written, graphic and digital format with floor and building summaries.

Document Review

None

Exclusions & Interpretation

This report and the attached expenditure forecasts generally identify the Expected Useful Life (EUL) and the Remaining Useful Life (RUL) of observed systems and components. EUL is projected based upon industry-standard guidelines and our experience with similar systems. RUL is projected based upon our assessment of age, condition and maintenance / repair history.

Our opinion of cost included within this report are based upon our experience with similar buildings and systems, industry-standard cost data, local cost data, discussions with contractors, and information provided by the current building management and maintenance staff. The costs provided are for planning purposes only and assuming open procurement of the recommended works. Actual project costs may vary significantly to those projected based upon inflationary factors, weather and time of season, unforeseen economic circumstances and market trends, contractor schedules, unusual owner requirements, and other factors beyond our control.

Where recommended projects require the use of a registered architect, licensed engineer of other professional (collectively referred to as A/E) we have included an allowance of 10% of the base project fee for this retention. Where recommended projects are likely to involve the retention of a General Contractor, we have included a separate collective line item for this retention. This allowance includes a percentage fee based upon the base project cost of 15% for Project Management, 20% for Contractors Profit and Overhead and a Contingency allowance of 10%. Unless otherwise stated project line items included within the capital and maintenance forecasts do not include for A/E fees or General Contractor costs.

When making the determination as to whether a General Contractor will be retained, we have generally considered that a General Contractor will only be retained when a project requires management of multiple contractors is required. A typical example would be brick repair and refurbishment resulting in management of masons, lintel installers, painters and related trades. An example of a project where we have considered that a General Contractor would not be required is pavement resurfacing. For this type of project, we have assumed that a single specialty contractor will be retained to complete and manage the project. Under this scenario, we have included the 45% allowance previously detailed into our unit rate.

The timing of the projected expenditures and their associated costs represent our opinion considering the aforementioned factors. Alternative methods of managing the existing equipment or systems may be feasible over the six-year study period. However, these alternative methods will depend upon actual management practices, financing requirements, and the ability of the engineering staff to perform some of the repairs in-house. Alternative scenarios that have not been presented to Faithful+Gould have not been considered within this report.

This report has been presented based upon our on-site observations, information provided to us, discussion with building management and maintenance staff listed in the executive summary, our review of available documentation (see scope of services and document review section) and our experience with similar systems. If any information becomes available that is not consistent with the observations or conclusions expressed within this report, we request that this information be immediately forwarded to us.

The evaluation of existing structures requires that certain assumptions be made regarding existing conditions. This evaluation was based upon our visual non-destructive evaluation of accessible conditions of the Property. Furthermore, this evaluation was limited in time on-site, fee, and scope and was not based upon a comprehensive engineering evaluation. As such, our report is not intended to represent a complete review of all systems or system components or a check or validation of design professionals' computations. Therefore, Faithful+Gould's evaluation and this report do not represent, warranty or guarantee any system or system component or the future performance of any site improvement.

Appendix G
Resumes

FAITHFUL+GOULD

RÉSUMÉ

Benjamin Dutton, FFB, MCIOB, MRICS
Project Coordinator

Benjamin Dutton has over twelve years of experience in Facility Assessment, working in all sectors of the industry, from multi-family residential and ecclesiastical facilities to airports and resorts. He has been employed by property developers and consulting firms, and previously founded a multi-office facility assessment corporation. Benjamin has been working with Faithful+Gould since 2005, and is spearheading the expansion of the company's already successful Facility Assessment sector.

Projects Benjamin has completed include Facility Assessment and expenditure forecasting for the U.S. Senate House Office Buildings in Washington, DC, assessment, capital planning and maintenance evaluation for Washington Dulles International Airport and Ronald Reagan National Airport, maintenance evaluation and asset inventory for the University of Virginia and American University, facility assessment of a 42-building school facility, pre-acquisition due diligence surveys for a 19-building industrial portfolio in the Pacific Northwest, and construction monitoring and management of various residential and adult living centers.

SELECTED PROJECT EXPERIENCE

- 230 Park Avenue, New York, New York
- Colliers Florida Portfolio, Miami, Florida
- Rosa Parks Federal Center, Detroit, Michigan
- National Institutes of Health, Bethesda, Maryland
- 202 State Street, Chicago, Illinois
- Washington Dulles International Airport, Dulles, VA
- Ronald Reagan Washington National Airport, Arlington, VA
- George Washington University Acquisition Surveys, Washington, DC
- Grace Episcopal High School, Alexandria, VA
- American University, Washington, DC
- University of Virginia, Charlottesville, VA
- Our Lady of the Blessed Shroud, WI and IL
- Pencader Industrial Portfolio, NJ and NY
- Rams Horn Resort, Greenwood, CO

Education:
Bachelor of Science, Building Surveying, 2000

Certifications/Affiliations:
Professional Member, Royal Institution of Chartered Surveyors

Professional Member, Chartered Institute of Building

Fellow, Faculty of Building

Member, Society for the Protection of Ancient Buildings

Years of Experience: 10+

- State Plaza Hotel, Washington, DC
- Edge Lofts Apartment, Portland, OR
- Table Rock Hotel, Laguna Beach, CA
- Chown Pella Apartment, Portland, OR
- River Island Office Estates, Eugene, OR
- The Henry Apartments, Portland, OR
- The Yachtsman Resort, Myrtle Beach, SC
- Colony Woods Apartments, Seattle, WA
- Logistics A and B Industrial Complex, Fort Lauderdale, FL
- Newberry Plaza Apartments, Chicago, IL
- Edgewater Beach Hotel, Chicago, IL
- Carroll Avenue Apartments, Cleveland, OH
- Ravinia Lofts Apartments, Chicago, IL
- Worldgate Office Complex, Herndon, VA
- Exploration V Office Complex, Columbia, MD
- Clock Towers Apartments, Lancaster, PA
- Alameda Towers Apartments, Kansas City, MO
- Ground Round Restaurant Portfolio, Various Locations

RÉSUMÉ

Richard Needler, AIA
Architectural (Interiors / Exteriors)

As a Senior Consultant of Facility Assessment services, Richard Needler has nearly 20 years experience in the facility assessment and due diligence field. His experience has been in all sectors of the industry, including commercial office and retail, multifamily and military base housing, assisted living, hospitality and judicial facilities throughout the United States. Richard has provided condition assessment, pre-construction and construction monitoring services for property acquisitions and refinancing, equity investments and real estate development projects.

His project management role has included performing the site visits and preparing facility assessment and due diligence documents, as well as directing teams of professionals in performing these services.

SELECTED PROJECT EXPERIENCE

Commercial/Retail
- 8515 Georgia Avenue Office Building, Silver Spring, MD
- Thirteen Property Wachovia Bank Portfolio, PA and VA
- Wachovia Park Office Building, Winston Salem, NC
- Sheet Metal Workers' Union Office Building, Alexandria, VA
- Matthews Festival Shopping Center, Matthews, NC
- Security Square Mall, Baltimore, MD
- 230 Park Avenue, New York, New York
- Colliers Florida Portfolio, Miami, Florida
- Rosa Parks Federal Center, Detroit, Michigan
- National Institutes of Health, Bethesda, Maryland
- 202 State Street, Chicago, Illinois

Residential/Assisted Living
- Midtown Reston Condominiums, Reston, VA
- University View Apartments, College Park, MD
- Willow Lake Apartments, Indianapolis, IN
- Stoneridge at University Center Apartments, Ashburn, VA
- Ashbridge Manor Assisted Living Facility, Downingtown, PA
- Atlantic Shores Retirement Community, Virginia Beach, VA

Hospitality
- Staybridge Suites Hotel, Chantilly, VA
- Drake Hotel, Chicago, IL
- Red Roof Inn Portfolio, GA, AL and FL

Education:
Bachelor of Architecture and Bachelor of Science – Environmental Design, Ball State University, College of Architecture and Planning, 1980

Professional Licenses:
Registered Architect: Maryland, 1989; Colorado, 1982

Certifications/Affiliations:
Member, American Institute of Architects (AIA)

Certified Environmental Site Assessor, Georgia Institute of Technology, 1996

Years of Experience: 30+

Courthouses

- U.S. Courthouse, Des Moines, Southern District of Iowa
- Howard H. Baker, Jr. Federal Courthouse, Knoxville, Eastern District of Tennessee
- Joel W. Solomon Federal Building and Courthouse, Chattanooga, Eastern District of Tennessee
- Earl Cabell Federal Building and Courthouse, Dallas, Northern District of Texas
- Eldon B. Mahon Federal Courthouse, Fort Worth, Northern District of Texas
- Joseph P. Kinneary U.S. Courthouse, Columbus, Southern District of Ohio

Military

- Marine Corps Base Quantico Officers' Family Housing, Quantico, VA
- Naval Station Norfolk Military Housing, Norfolk, VA
- Little Creek Amphibious Base Military Housing, Norfolk, VA
- Oceana Naval Air Station Military Housing, Virginia Beach, VA
- Naval Surface Warfare Center Military Housing, Annapolis, MD

David Elwyn, P.E.
Structural Design

David Elwyn has over 28 years experience in the condition assessment industry. He is experienced in all aspects of construction ranging from design to cost and project management, claims management and dispute resolution, contract administration and close-out.

Mr. Elwyn's professional experience includes 19 years with a leading architectural, engineering, and construction services firm, during which time he progressed from construction administrator to firm president and managing partner. He has developed and implemented computer applications for construction administration and facilities evaluation, established quality assurance procedures for design and document review, investigated and negotiated design defect claims and contract disputes, and developed project execution checklists and procedures.

He is an experienced structural engineer, having served as lead design engineer on numerous public and private new construction and renovation projects, with particular expertise in masonry design and restoration, and structural forensic investigation and analysis.

Mr. Elwyn's project management experience includes serving as owner's project representative, leading full service architectural and engineering design teams from project inception and contract negotiation through construction close-out, serving as consulting engineer team leader providing engineering services to major architectural design firms, structuring and executing design/manage performance contracts, and providing construction management services as agent of the Owner.

Representative Recent Project Experience

- **Cornell University, Ithaca, New York**.
  Project coordinator for cost estimating services and cost reconciliation services for the University:
  - New Sailing Center SD Estimate
  - Milstein Hall; DD and CD Estimates
  - Hollister Fluids Lab; DD and CD Estimates
  - Olin Library Suite 106 Renov; CD Estimate
  - Riley-Robb Hall 50% CD Estimate

Education:
Clarkson University, Potsdam, New York. BSCE Suma Cum Laud – 1980.

Professional Licences:
Registered Professional Engineer: New York, 1989; New Jersey, 1988; Pennsylvania, 1993; Texas, 1986 (inactive).

Affiliations:
National Society of Professional Engineers (NSPE)

Presentations:
Construction Change Orders; Lorman Education, 2005 and 20006

Risk Management in Construction; Lorman Education, 2006

Energy Performance Contracting; Benefits, Problems, Solutions; White paper on performance contracting in New York public schools presented to members of the NYS legislature, 1997

Years of Experience: 28

- Morrison Hall Labs Renovation 50% CD Estimate
- Uris Hall Vertibrate Animal Facility; 50% CD Est
- Child Care Center; DD Estimate

- **Cornell University, Ithaca, New York**
  Project Manager, Senior Consultant for pre-project planning services for the University:
  - Livestock Teaching Arena Conceptual Estimate
  - Dairy Facility VE Study (to be conducted in May)

- **Syracuse Hancock International Airport, Syracuse, New York**
  Senior Consultant for Independent Professional Services Fee Estimates.
  - Obstruction Removal Project
  - Sound Attenuation Project

- **General Electric Energy, Schenectady, New York**
  Senior Consultant for conceptual cost estimates and pre-project planning services.
  - Building 2 Reconstruction
  - Building 5 Reconstruction
  - Building 53 Reconstruction
  - Building 55 Reconstruction
  - Building 59E Renovation

- **United States Geological Survey**
  Senior Consultant for Condition Assessment and Building Engineering Evaluation
  - Northern Appalachian Research Laboratory, Wellsboro, PA
  - Florida Caribbean Science Center, Jacksonville, Florida

Additional Experience

- 230 Park Avenue, New York, New York
- Colliers Florida Portfolio, Miami, Florida
- Rosa Parks Federal Center, Detroit, Michigan
- National Institutes of Health, Bethesda, Maryland
- 202 State Street, Chicago, Illinois

Craig Thompson, PE
Fire & Life Safety

Mr. Thompson has over fifteen years of experience in the field of fire protection engineering and assessment. Mr. Thompson has specialized experience in smoke control/management systems, fire alarm and automatic sprinkler/suppression systems design and analysis, building codes and standards for both new and renovated structures, fire protection surveys, fire alarm and automatic sprinkler/suppression system inspections, site investigations and Fire Safety Evaluation System (FSES) surveys, NFPA 101A. He has also been involved in conducting complete building plan reviews, including means of egress calculations, analysis of use group, height area calculations and construction type.

Representative Experience

- **The Pennsylvania State University, University Park, PA.** Project Manager responsible for providing design and consulting services for the installation of sprinkler systems in 49 residence hall buildings totaling over 2.3 million sq. ft. Scope includes feasibility studies, master plans, system design and construction period services.

- **The Pennsylvania State University, Commonwealth Campus, PA.** Project Manager responsible for providing design and consulting services for the installation of sprinkler systems in seven residence hall buildings totaling 280,000 sq. ft. Scope includes feasibility studies, master plans, system design and construction period services.

- **Pattee Library, The Pennsylvania State University, University Park, PA.** Project Manager responsible for providing automatic suppression system design for the Pattee Library. Project includes feasibility studies, system design and construction period services.

- **Howard Hughes Medical Institute, Janelia Farms Campus, Loudoun County, VA.** Project Manager responsible for fire protection code consulting during the design of a 400,000 square foot landscape building containing over 265,000 square feet of research laboratory spaces, conference center, and central plant. Separate facilities include conference facilities and housing and approximately 40 townhouse style facilities for visiting scientist housing. Additional project efforts include the renovation of a historic manor house located on the property.

PROFESSIONAL REGISTRATION
Registered Professional Engineer, 1998, Maryland; 1999 Virginia

EDUCATION
Master of Engineering, Fire Protection Engineering, University of Maryland, College Park, MD, 2001

B.S., Fire Protection Engineering, University of Maryland, College Park, MD, 1992

MEMBERSHIPS/ AFFILIATIONS
Member, National Fire Protection Association (NFPA)
Member, Society of Fire Protection Engineers (SFPE)

- **John F. Kennedy Center for the Performing Arts, Washington, D.C.** Project Manager and Senior Fire Protection Engineer responsible for conducting life safety surveys and an egress study to identify and design upgrades as part of a renovation of this facility. He is currently providing automatic sprinkler system design and retrofit services for the Opera House's public spaces and a water curtain design to supplement the existing proscenium fire curtain.

- **Arts and Industries Building Renovation, Washington, DC.** Project Manager and Senior Fire Protection Engineer responsible for providing fire protection and life safety services for various phases of the renovation effort to the historic, 500,000 sq. ft., Smithsonian Institution's Arts and Industries Building (AIB). Project scope calls for the design of fire alarm and sprinkler systems, as well as a building code compliance analysis for the main acceptable level of protection.

- **Digex, Laurel, MD Headquarters**. Project Manager responsible for conducting field surveys, hydraulic calculations and fire protection conceptual design. The scope of the project included the determination of hazards, the preparation of fire alarm, FM-200 and automatic sprinkler conceptual design drawings and building and life safety code analysis. Additionally, the project included the review of the fire alarm, FM-200, and sprinkler shop drawings to ensure compliance with the codes and standards.

- **Lake Anne Fellowship House, Reston, VA**. Project Manager for the fire alarm system retrofit of the 9-story nursing home. Project included the building assessment survey and design and installation of the addressable fire alarm and detection system.

- **Wildwood Towers, Arlington, VA**. Project Manager for the fire alarm system retrofit of the 10-story apartment building. Project included the building assessment survey and design and installation of the ADA compliant addressable fire alarm and detection system.

- **Wildwood Park, Arlington, VA**. Project Manager for the fire alarm system retrofit of the 10-story apartment building. Project included the building assessment survey and design and installation of the ADA compliant addressable fire alarm and detection system.

- **Westfield Realty 1100 Wilson Blvd, Arlington, VA**. Project Manager for the fire alarm system retrofit of the 30-story office building. Project included the building assessment survey and design and installation of the ADA compliant addressable fire alarm and detection system.

- **Westfield Realty 1701 North Ft. Meyer Drive, Arlington, VA**. Project Manager for the fire alarm system retrofit of the 13-story office building. Project included the building assessment survey and design and installation of the ADA compliant addressable fire alarm and detection system.

- **Brown's Dulles Dodge, Chantilly, VA**. Project Manager for the fire alarm system of the 2-story office building. Project included the building assessment and design and installation of the ADA compliant addressable fire alarm and detection system.

- **Building System Assessments.** Project manager for building system assessments to include site surveys for code compliance of the building construction, the building fire alarm and detection systems.
    - 1000 Wilson Blvd, Arlington, VA
    - 1100 Wilson Blvd, Arlington, VA
    - 1401 Wilson Blvd, Arlington VA
    - 1701 North Ft. Meyer Drive, Arlington VA
    - 1515 Wilson Blvd, Arlington, VA
    - 1815 North Ft. Meyer Drive, Arlington, VA

- **Arlington County Inspections, Arlington, Virginia.** Fire Protection Engineer responsible for conducting complete building plan reviews to include means of egress calculations, building use classification, construction type classification, building height and area calculations, fire suppression specifications and fire alarm requirements; providing design review of fire alarm shop drawings; overseeing sprinkler plan reviews consisting of sprinkler head spacing, hazard classification, fire pump and standpipe sizing, and hydraulic calculations to meet standard specifications for both residential and/or commercial construction. Also responsible for training inspectors in the procedures for inspecting new fire suppression systems and assisted inspectors in fire alarm and fire suppression system inspections.

- Colliers Florida Portfolio, Miami, Florida
- Rosa Parks Federal Center, Detroit, Michigan
- National Institutes of Health, Bethesda, Maryland
- 202 State Street, Chicago, Illinois

Maury Paslick, P.E.
Mechanical, Electrical & Plumbing

As a Mechanical, Electrical and Plumbing (MEP) condition assessor, Mr. Paslick is responsible for assessing MEP systems for office buildings, hospitals, industrial/warehouse buildings, schools, and other commercial and institutional buildings.

With 33 years of MEP assessment experience, he supervises a staff of engineers and designers implementing those concepts. Much of his design experience involves renovation and adaptive reuse requiring analysis of existing conditions and evaluations and recommendations of systems suitable to the physical and operational constraints. Besides being a professional engineer, he is a certified commercial electrical, mechanical, and plumbing inspector and electrical, mechanical and plumbing plans examiner, as well as certified in Module 1 as a value engineer. He has also performed many condition assessments averaging two per month. He is well versed in life cycle cost analysis and cost estimating. He brings your projects the benefit of experience with a wide variety of systems and familiarity with analytical methods.

Representative Condition Assessments Projects

- **Fairfax County Schools/Fairfax, Virginia**
  Chief Electrical Engineer for the team that evaluated all elementary schools for Virginia's largest school division to assist with long-term planning.

- **Culpeper Public Schools/Culpeper County, Virginia**
  Chief Engineer in charge of the team evaluating the MEP systems of all eight county schools. Following extensive surveys conducted during holiday times when students were on break, reports were prepared recommending and prioritizing repairs and upgrades and estimated costs were provided so that a long-term plan could be developed by county officials.

- **Mitre Buildings/Bedford, Massachusetts and McLean, Virginia**
  MEP Engineer for the evaluation of MEP systems for these two multi-story corporate buildings.

Education:
The Johns Hopkins University/BES/1975/Electrical Engineering

Professional Licences:
1981/Texas/Professional Engineer - Electrical (inactive)

1990/Maryland/Professional Engineer - Electrical

1991/District of Columbia/Professional Engineer – Electrical

1996/Florida/Professional Engineer – Electrical

1999/North Carolina/Professional Engineer - Electrical

Affiliations:
National Society of Professional Engineers (NSPE)

Years of Experience: 28

- **230 Park Avenue Office Building/New York, New York**
  MEP Engineer for the due diligence evaluation of this 5-story plus 3-story roof-level cupola high-rise riveted iron frame office building containing an approximate gross floor area of 1,300,000 SF. The building contains 38 office suites, a management-occupied suite and 2 ground level retail units. The property is on a .415-acre site.

- **One Judiciary Square/Washington, D.C.**
  MEP Engineer for the condition assessment of this high-rise building constructed in 1987. There are 11 floors above grade, one concourse level below grade, and two parking levels below the concourse. The building has a nominal area of 850,000 SF.

- **LaCosta Resort/San Diego, California**
  MEP Engineer for this hotel resort, including guest and meeting rooms, lobby area, administrative offices, and restaurants. The hotel and clubhouse were built in 1965, with renovations and expansions in 1970, 1985, 2003, 2006 and ongoing. There are 472 rooms in 22 one, two and three-story buildings. Other amenities surveyed included several pools, ballrooms, retail shops and spa.

- **USGS Florida Caribbean Science Center/Gainesville, Florida**
  MEP Engineer for the condition assessment of this scientific research facility for the study of fish species on an 18-acre site with 20 buildings including chemical storage building, service garage, shop, main R & D building, portable office building, battery storage, incubator building, and formalin storage.

- **301 Howard Street/San Francisco, California**
  MEP Engineer for the condition assessment of this 21-year-old office building on .415 acres.

- **1 East Broward/Fort Lauderdale, Florida**
  MEP Engineer for the condition assessment of this 19-story, Class A office building.

- **Smithsonian Arts and Industries Building/Washington, D.C.**
  MEP Engineer for the condition assessment of this building of about 185,000 SF originally opened as the U.S. National Museum which was constructed in 1881 and renovated in 1996. Leaks and flakes of rust prompted closing of the building in 2004, leaving a largely vacant building with some office space still in use. This condition assessment was conducted in 2006 in anticipation of a major rehabilitation project.

- **Prince William County McCoart Building/Prince William, Virginia**
  MEP Engineer for condition assessment report of the MEP systems of this 60,000 SF County Administration Building built in the 1980's.

- **MVI Post Building/Falls Church, Virginia**
  MEP Engineer for the condition assessment of this 2-story, 20,000 SF building housing post-production audiovisual editing studios and support offices. This project also included schematic design and pricing for building MEP systems upgrades.

- **One Bethesda Office Building/Alexandria, Virginia**
  MEP Engineer for the condition assessment of the central air handler unit and related system. A report was prepared on the remaining useful life and suggested timeframe for replacement.

- **1411 K Street Arlington Square Office Building/Washington, D.C.**
  Chief Engineer for the extensive evaluation of the mechanical, electrical, and plumbing systems for this multi-story office building, the review of pertinent building documents and the preparation of a detailed report on the condition and recommendations with regard to each system.

- **Bethesda Towers/Bethesda, Maryland**
  Chief Engineer for the review of the chilled water and air handler systems, garage ventilation systems, induction systems, all electrical systems including switchgear, lighting, distribution, emergency power systems, and plumbing systems including drainage and water systems for this condominium project with two multi-story residential towers.

- **1901 L Street Office Building/Washington, D.C.**
  Chief Engineer for the review of the mechanical systems including the chilled water system, condenser water systems, air handling systems, exhaust systems, induction units, garage ventilation systems and controls, the electrical systems including switchgear, power distribution, emergency power and lighting systems and the plumbing systems including hot and cold water, sanitary drainage and storm water drainage for this multi-story office building.

- **Dulles Hilton/Sterling, Virginia**
  Lead MEP Engineer for a two-phase survey and evaluation of this recently renovated and expanded business hotel. The first phase was to complete a construction punch list survey of 155 new guest rooms, a new conference center, and a new central mechanical plant to support the addition. The second phase included a condition assessment survey of the overall facility.

- **1310 North Courthouse Road/Arlington, Virginia**
  MEP Engineer for the condition assessment and due diligence study of a 12-story, 380,000 SF office building.

- **USGS Hammond Bay Biological Station/Millersburg, MI**
  MEP Engineer for the comprehensive condition assessment of the assets of this US Geological Survey facility dedicated to the study and control of sea lampreys in the Great Lakes. The facility is a converted Coast Guard Station originally constructed in the late 1800's.

- **Sheraton Hotel/Sunnyvale, California**
  MEP Engineer for the condition assessment of a 26-year old, 2-story, full service hotel with 173 rooms, meeting rooms, and restaurant.

- **Sheraton San Jose/Milpitas, California**
  MEP Engineer for the condition assessment of an 18 year old, high rise full service hotel with 229 rooms, meeting rooms, and restaurant.

- **Sheraton Four Points/Pleasanton, California**
  MEP Engineer for the condition assessment of a 23 year old, 2-story full service hotel with 198 guest rooms, meeting rooms, and restaurant.

- **Holiday Inn/Louisville, Kentucky**
  MEP Engineer for the condition assessment of a 36 year old, high rise full service hotel with 169 guest rooms, meeting rooms, laundry and restaurant.

- **XM Radio Headquarters/Washington, D.C.**
  MEP Engineer for the condition assessment of two adjacent buildings in the District that house corporate offices, 84 sound studios, broadcast control rooms, and data center. One building is 3-stories plus basement with an area of 248,000 SF. The second building is 2-stories with an area of 43,000 SF.

- **Verizon Center/Washington, D.C.**
  MEP Engineer for the condition assessment of the MEP systems of this 1 million SF multi-sport complex built in 1996.

- **American University/Washington, D.C.**
  Chief MEP Engineer for the team conducting a detailed inventory survey and condition assessment of assets and equipment in all buildings on the main campus, Tenley campus, and two nearby satellite facilities, including over 40 buildings. Team members inventoried the major mechanical, electrical, plumbing and fire protection systems components in each building, evaluated the remaining useful life of the equipment and systems, and provided budget costs for replacement. Manufacturers were contacted for information on recommended maintenance practices and preventive maintenance procedures were compiled for all major systems and components. The information gathered through this process was entered in a database and will be used to schedule routine maintenance and budget for future construction and alteration projects.

- **Metropolitan Police Department/Washington, D.C.**
  Chief Electrical Engineer on the team that surveyed approximately 20 sites to determine the condition of mechanical, electrical, and plumbing systems. Prepared reports containing life expectancies and cost estimates.

- **U.S. Naval Flag Quarters/Various Locations**
  Chief Electrical Engineer on the team responsible for the audit and survey of mechanical, electrical and plumbing systems of newly designated flag quarters for the automated facilities maintenance plan for the United States Navy. Sites inventoried included those in Annapolis, Mechanicsburg, New Orleans, and Patuxent.

- **Reston Town Center/Reston, Virginia**
  Chief Electrical Engineer for the preparation of a condition assessment and due diligence report of a complex which included two 400,000 SF, 11-story office buildings with retail spaces at grade; a 14-story hotel with 4-story garage; a 40,000 SF 3-story retail and office building; and a separate 4-story garage.

- Colliers Florida Portfolio, Miami, Florida

- Rosa Parks Federal Center, Detroit, Michigan

- National Institutes of Health, Bethesda, Maryland

- 202 State Street, Chicago, Illinois

- **Ritz Carlton Hotel/Pentagon City, Virginia**
  Prepared Condition Assessment and Due Diligence Report for this 18 story luxury hotel with two below grade levels and a mechanical penthouse level. The lowest level, designated Lower Level 1, housed some of the central mechanical and electrical equipment, the laundry and dry cleaning operations, the building engineering department, the security office, and the shipping and receiving area. The first level below grade, labeled Lower Level 2, consisted of covered parking, engineering shop areas, and miscellaneous storage. The main reception areas, administrative offices, kitchens, and dining areas were located on the first floor. The second floor was comprised of meeting rooms and the ballroom. The fitness center and some central mechanical, electrical, and plumbing equipment were located on the third floor. The fourth through eighteenth floors contained approximately 250 guest rooms. The heating water boilers, the cooling towers and the domestic water heaters were located in the mechanical penthouse.

- **Anthem Blue Cross/Blue Shield Complex/North Haven, Connecticut**
  MEP Engineer who performed a condition assessment and reserve study of a four building complex built from the late 1970's into the early 1990's.

- **Prudential Office Tower/Jacksonville, Florida**
  MEP Engineer who performed a due diligence survey and report of a 23-story office structure built in the late 1960s.

- **Watergate South Condominiums/Washington, D.C.**
  Chief Electrical Engineer who performed a condition assessment and reserve study of a 12-story condominium complex built in the late 1960s. Facility involved three below grade levels with parking and equipment rooms.

- **Yorktown 50 Office Building/Fairfax, Virginia**
  Chief Electrical Engineer who prepared a condition assessment and due diligence report of a 100,000 SF 6-story office building build in the mid-1970s.

- **The Somerset House 1 and 2 Condominiums/Washington, D.C.**
  Chief Electrical Engineer who performed a condition assessment and reserve study of two condominium complexes that were built in 1987-88. Each 21-story building had one level of parking and support spaces below. Building entry and common spaces were located on the first floor. The additional twenty floors were residential.

- **The Northumberland Apartments/Washington, D.C.**
  Chief Electrical Engineer who performed a condition assessment and reserve study of 67 apartments constructed in 1911.

- **The Westchester Condominium/Washington, D.C.**
  Chief Electrical Engineer who performed a condition assessment and reserve study of a 560-unit, 5-building complex completed in the 1930s.

- **Washington Harbor/Washington, D.C.**
  Chief Electrical Engineer who performed a condition assessment and reserve study of two multi-story towers located over a two-level garage. One tower had six stories and the other had seven stories. Each tower had retail space at grade and offices and condo on the upper levels. The structures were built in 1982-85.

- **Engineering Survey and Systems Evaluations for the Watergate Office Building/Washington, D.C.**
  Engineering Project Director/Chief Electrical Engineer who performed a site investigation and analyzed the condition, appropriateness, performance and capacities of the MEP systems for this 300,000 SF office tower. The report included estimates of remaining expected life of the building's systems as well as estimated costs for systems replacements.

- **Interfin Office Complex/Houston, Texas**
  Engineering Team Leader and Chief Electrical Engineer for the survey and condition assessment of 4 office buildings totaling over 4 million SF. The report addressed the general capacities of the engineering systems, current conditions and maintenance, expected life and compliance with current codes.

- **First Interstate Bank/Houston, Texas**
  Engineering Team Leader for the engineering effort which surveyed and analyzed 5 downtown Houston office buildings as candidates for relocation of approximately 120,000 SF of banking support functions including a 40,000 SF data processing center.

- **AMI Doctors Hospital Expansion Study/Laredo, Texas**
- **AMI Highland Park Expansion Study/Covington, Louisiana**

  Chief Electrical Engineer who participated on the A/E team with the American Medical International (AMI) operational and strategic planners to develop comprehensive long range facility plans. This included condition assessments for major building systems at each site. Cost estimates and detailed plans of phased construction were developed.

- **Normandy Terrace Northeast and Southeast Nursing Homes, San Antonio, Texas**

  Chief Electrical Engineer for the audit and inspection of existing MEP systems in the 200, 100 and 70 bed nursing home facility and hospitals. Work included preparing an audit of the existing HVAC, plumbing and fire protection systems that addressed the condition, operation and code compliance. The information in this report was used as a basis in development of a renovation plan.

- **Vanderbilt Neonatal and OB-GYN/Nashville, Tennessee**

  Chief Electrical Engineer for the team that performed initial feasibility studies for this 50,000 SF structure in order to achieve the client goals of expanding and upgrading the Neonatal Intensive Care Units. The engineering team performed surveys and assessed existing conditions in order to define the needed scope of work.