

Report on the Building and Site Study for the New Fire Headquarters City of Peekskill



**MANITOU
INCORPORATED**



**Mitchell
Associates
Architects**

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Report on the Building and Site Study for the New Fire Headquarters City of Peekskill

Submitted by Mitchell Associates Architects and Manitou, Inc.

In February, 2008 The City of Peekskill (City) retained Mitchell Associates Architects (MA) to undertake a study of the building and site needs of a new fire headquarters for the city. At that time, it was anticipated that the probable headquarters location would be adjacent the current station on Crompond Road. As the project progressed it was determined that it was necessary to examine a number of alternative sites, both from the point of view of the physical characteristics of the sites, and from the point of view of how their location would affect the Fire Department's operations. In April, 2008 the project scope was expanded to add the services of Dr. Charles Jennings of Manitou, Incorporated, to conduct a review of current Peekskill Fire Department station locations and evaluate the potential impact upon response times for the potential sites being evaluated.

In general, this study breaks down into the following tasks:

- ***TASK 1 – PROGRAMMING***
 - Program
 - Diagrammatic Floor Plans
 - Diagrammatic Prototype Site Plan
- ***TASK 2 – MANITOU ASSESSMENT***
 - Background: The City and Fire Department
 - Problem Overview
 - Response Time Analysis
 - Headquarters Site Recommendations
 - Suggestions for Further Study
- ***TASK 3 – EVALUATE SELECTED SITES***
 - Input the site data for five parcels into CAD to allow conceptual site plans to be drawn
 - Provide a conceptual site plan for each of the candidate sites
 - Commentary on the firematic services impact of the parcel choice
 - Commentary on physical limitations to development of the candidate sites
 - Reduce candidate site to two

- **TASK 4 – DEVELOP ADVANCED SCHEMES FOR 2 FINAL PARCEL CHOICES**

- Site development plans for the two candidate sites
- Preliminary floor plans for the two candidate sites
- One rendering of possible appearance
- One preliminary estimate of probable cost
- Partial Taking Diagram - Crossroads

TASK 1 – PROGRAMMING

- Program
- Diagrammatic Floor Plans
- Diagrammatic Prototype Site Plan

A series of meetings were held with Fire Department personnel to develop a facility assessment (program) which included descriptions of each space within the proposed headquarters, a diagram of each room, a diagrammatic prototype site plan, and a spreadsheet to determine the size of the building. The building design committee (Committee) met three times with the architect, and numerous times in subcommittee groups. The Committee members included:

- Chief John Pappas
- Assistant Chief Len Varella
- Assistant Chief Bob Fiorio
- Deputy Chief Jim Howard
- Capt Sue Sheridan
- Career Firefighter Kevin Bristol
- Career Firefighter Jim Ferris
- Firefighter Bruce Pappas
- Firefighter John Rose
- Firefighter Scot Rose
- Firefighter Dom Dipierro
- Firefighter Vin Dipierro
- Firefighter Gary Fetzer
- Sal Carano
- John Kelly
- Assistant Mayor, Don Bennett

A draft program was published on March 20, 2008 (appendix “A”) that identified a headquarters building that would house the following entities:

- Fire Department Administration
- Columbian Engine
- Columbian Hose
- Washington Engine
- Cortland Hook and Ladder
- Centennial Hose
- Fire Patrol
- Career Firefighters

In addition, space in the apparatus bay was configured to allow for the possible future inclusion of Centennial Hose.

The program defines all of the required spaces for a modern, code compliant facility that meets current needs, with a modest attempt to allow for anticipated future needs. Diagrams of individual rooms were included in the program (appendix “B”). These room diagrams demonstrate that the stated functions for the rooms are met, and define the individual room sizes. The room sizes are summed up in a spreadsheet (appendix “A”) that incorporates projected areas for corridors and walls to define the total building size that resulted in the following areas:

Program Topic	Area	Percent
Apparatus Bay	7,048	20%
Firematic Support	3,360	9%
Administration	1,738	5%
Firefighters	3,823	11%
Bunking	1,693	5%
Public Spaces	8,387	23%
Miscellaneous Spaces	984	3%
Vertical Circulation	1,342	4%
Corridors and Walls	7,663	21%
Total Area	36,038	100%

Since it was impossible to determine at the time whether the selected site would allow a two story building or require a three story building, an analysis was made of the additional construction area that would be required for a third story. The result was that a third story would add approximately 860 square feet to the building size.

With this information a diagrammatic prototype site plan was developed to assist with a “first blush” evaluation of potential sites (Appendix “C”). The site plan defined that a site of approximately 2 acres would be required.

The results of Task 1 were presented to the City Council in July, 2008.

TASK 2 – MANITOU ASSESSMENT

- Background: The City and Fire Department
- Problem Overview
- Response Time Analysis
- Headquarters Site Recommendations

At the time this project began, it was anticipated that the probable headquarters location would be adjacent the current station on Crompond Road. That site has significant shortcomings due to its size and topography, and early in the project discussions began regarding identifying alternative sites that would be more easily built on. The areas of interest became the four parcels that adjoin the intersection of Broad and Park, the current station location at 701 Washington Street, and the original target site on Crompond Road.

In April, 2008 the project scope was expanded to add the services of Dr. Charles Jennings of Manitou Incorporated to conduct a review of current Peekskill Fire Department station locations to evaluate the potential impact upon response times for all potential sites being evaluated. This analysis included the production of maps, review of historic workload, and a documentation of the Department's current and future operating modes.

Potential changes to deployment and operations were evaluated with Department leadership and City officials, including addition of staff, increased staffing per apparatus, and use of stand-by crews. Other changes considered were the potential for volunteer personnel to respond to the station, rather than to the scene of emergencies, to determine what influence this potential change would have the programming for a new facility, and its affect on the suitability of sites and orientation of the facility.

Each site was listed for its impact on response times, indicating both improvements and increases in response times. Any significant changes in response time were indicated for each site, as appropriate. The orientation of apparatus ingress and egress was considered for each site, in order to minimize disruption to pedestrian and traffic flow, and assure timely response.

The potential to consolidate apparatus from existing facilities as well as reserve apparatus was also considered.

The Manitou report determined that the four parcels adjacent the intersection of Park and Broad are well positioned for proper response. It is appropriate to maintain a response capability at 701 Washington Avenue, but that site is not appropriately located for a main headquarters.

The Manitou report was presented to the City Council in early August, and is included as Appendix "D".

TASK 3 – EVALUATE SELECTED SITES

- Input the site data for five parcels into CAD to allow conceptual site plans to be drawn
- Provide a conceptual site plan for each of the candidate sites
- Commentary on the firematic services impact of the parcel choice
- Commentary on physical limitations to development of the candidate sites
- Reduce the number of candidate sites to two

Using satellite imagery as well as topographic and physical mapping, baseline maps were developed for the four parcels adjacent Park and Broad (Appendix "E"). Using the diagrammatic concept site plan developed in Task 1, preliminary concept site plans were drawn for each of the four sites (Appendix "E"), and presented at a City in Early August. At the Council meeting, the sites were discussed in great detail, and the following conclusions were drawn:

- **Site 1** - The vacant parcel to the South West of the intersection, bounded by Park, Broad and Brown cannot reasonably be adapted for the fire headquarters due to the approximately 18 foot rise in grade going from Park to Brown Street.
- **Site 2** - The potential parcel to the South East of the intersection, bounded by Park, Broad and Brown has a number of problems that were particularly troubling to the Fire Chief and his staff.
 - There is approximately a ten foot rise in grade along Broad Street in front of what would be the front of the station. This would result in a multi-level "first" floor, including having the apparatus bay on several levels.
 - Apparatus exiting on Broad in icy weather could encounter vehicles coming downhill from the South on Broad that would be unable to stop.
 - There is an approximate ten foot drop in elevation from Brown to Park. This would result in a portion of the "first" floor being partially underground at the Brown Street end.

- There would be a steep driveway for responder vehicles that may already be coming downgrade along Brown, coming from the East. This could be problematic during icy conditions.
 - The site probably does not allow for outdoor training or recreation.
- **Site 3** - The parcel to the North East of the intersection, bounded by Park, Broad and Main has a mix of benefits and drawbacks:
- The parcel is large enough to allow outdoor training and recreation
 - The site is not deep enough to allow drive through bays facing onto Broad. As a result, the apparatus bay needs to be divided into two spaces. One for the smaller trucks that would back in from Broad, and one for the two largest trucks that would enter from Park and drive through, exiting on Main.
 - There is a ten foot rise in elevation from park to Main. This will result in a steep exit driveway for the largest apparatus as it approaches Main making for difficult exiting under icy conditions (Appendix "F").
 - At the point of exit onto Main, traffic from East is going downhill, and has a limited site line. This is hazardous and would require installation of a traffic signal to control traffic when fire apparatus exited the station.
 - The ten foot rise would result in a portion of the first floor of the building to be partially underground at Main.
- **Site 4** - The parcel to the North West of the intersection, bounded by Park, Broad and Main is currently the Crossroads shopping Center. From a physical point of view, it is an ideal site:
- This is the only site that is essentially flat.
 - The site allows all fire apparatus to exit onto Broad Street with excellent lines of site.
 - It is easy for the largest returning vehicles to have drive-through access.
 - The site allows the building to be laid out so that the public entrance and public spaces front on Main Street, positively reinforcing the City's urban fabric.
 - The site allows adequate on-site parking.
 - The site allows outdoor training and recreation
- **Site 5** - Subsequent to the August presentations we prepared an evaluation of the parcel adjacent the current station on Crompond Road (Appendix "F"). As the diagrams indicate, it would be extremely difficult to use this parcel. The apparatus bay would need to intrude into South Division Street 35 feet, necessitating the permanent closure of the street, and leaving the houses that currently front on South Division with no frontage. Additionally, the site rises approximately 20 feet from the frontage line to the proposed rear of the building. This would require extremely expensive construction with extensive sheeting and retaining walls if the soils are soft, or blasting if there is rock.

The Council members discussed sites number one through four at length, receiving input from the Fire Department, Building and Planning Departments and the City's Corporation Counsel. The Council agreed that parcels one and two were not tenable. For the reasons outlined above, and it was agreed that further evaluation should occur for sites three and four, the sites fronting on Main, on either side of Broad as Task 4.

• **TASK 4 – DEVELOP ADVANCED SCHEMES FOR 2 FINAL PARCEL CHOICES**

- Site development plans for the two candidate sites
- Preliminary floor plans for the two candidate sites
- Partial Taking Diagram - Crossroads
- One rendering of possible appearance
- One preliminary estimate of probable cost

Site plans were developed for sites three and four (Appendix “F”). The plan for site 3 was driven by the attempt to meet three goals:

- Work with the narrow site strung along Broad.
- Allow a drive through bay while respecting the needs of the adjacent church.
- Work with the ten foot grade change between Park and Main.

A site grading section was developed to determine the degree of difficulty that the ladder truck would face exiting onto Main. Combined with the limited site line looking east along main, and the descending grade for cars coming from the east, exiting for the ladder truck is problematic.

The plan for site 4 was approached to demonstrate a scheme for the redevelopment of the entire block. For this purpose, the scheme shows the Eastern half of the site occupied by the fire station, and the Western half occupied by “Incubator” buildings. The incubator buildings would have commercial and/or retail space on the first floor with two or more floors of residences above. In the event that the City chooses to not develop the entire block, Appendix J has a plan that indicates which of the current business would need to be taken.

A first floor plan was developed for site 3. First and second floor plans were developed for site 4, and were developed in close coordination with the program, satisfying all of its requirements. The program forecast that the total building would require 36,038 square feet of space. The building as designed is 33,752 square feet, a reduction of 6% that was achieved through an efficient layout.

Although not a part of the original project scope, elevations and a rendering were developed for the design for site 4 (Appendix “I”). It is our belief that the design satisfies all of the requirements of the building program, while achieving the intention of reinforcing and helping revitalize downtown, with a building that will be a landmark in the city at least until the end of the century.

A detailed, preliminary estimate of probable construction cost was developed by our estimating consultant, NASCO Construction Services (Appendix “J”). NASCO has been in business for over 30 years and provides in the range of 200 estimates per year. They are located in Armonk, and are very familiar with local construction costs. The anticipated “bricks & mortar” cost will be \$11,200,000, if built in 2009. This cost is \$331 per square foot. Soft costs for this project are budgeted at \$1,800,000. In addition, a construction contingency budget has been set at \$700,000, bringing the total project cost to \$13,700,000, plus land acquisition.

List of Appendices

- A. Program**
- B. Diagrammatic Floor Plans**
- C. Diagrammatic Prototype Site Plan**
- D. Manitou Report**
- E. Five Candidate Sites**
- F. Site Development Plans for Two Sites**
- G. Floor Plans for Two Sites**
- H. Partial Taking Diagram - Crossroads**
- I. Rendering**
- J. Preliminary Estimate**

Appendix A Program

MITCHELL ASSOCIATES ARCHITECTS

• EMERGENCY SERVICES FACILITIES •

Fire Station Program Document

Project Name: Peekskill Fire Department Central Station

Program Meeting Date: 2/21/08, 2/27/08, 3/13/08

Printout Date: **October 21, 2008**

Filename: Peekskill Fire Program.doc

When answering questions, indicate what you want in the future, not what you currently have.

A General Information

A1. Number of Members; total: **224** ; active: **190** ; female: **10** ; male: **214**; career: **24**

A2. Building Committee:

Meeting Attendance:	2/21/08	2/27/08	3/13/08
A5.1. Chief John Pappas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.2. Asst. Chief Len Varella	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.3. Asst. Chief Bob Fiorio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.4. Deputy Chief Jim Howard	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A5.5. Capt Sue Sheridan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.6. Career F.F. Kevin Bristol	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A5.7. Career F.F. Jim Ferris	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A5.8. F.F. Bruce Pappas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.9. F.F. John Rose	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A5.10. F.F. Scot Rose	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.11. F.F. Dom Dipierro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.12. F.F. Vin Dipierro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.13. F.F. Gary Fetzer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.14. Sal Carano	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.15. John Kelly	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.16. Don Bennett	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A3. Attorney: **City of Peekskill Corporate Council Joseph Stargotti**

A3.1. Phone & fax #: **P: (914) 734- 4181 F: (914) 734- 4183**

A4. Type of entity:

A4.1. Municipality: **City** Type: **Combination Dept**

A5. Number of Companies or Departments involved: **6 companies & career staff**

A5.1. **Columbian Engine**

A5.2. **Columbian Hose**

A5.3. **Washington Engine**

- A5.4. **Cortland Hook & Ladder**
- A5.5. **Centennial Hose**
- A5.6. **Fire Patrol**
- A5.7. **Career**

B Functional Activities in Building

- B1. Types of response:
 - B1.1. Fire: **Yes**
 - B1.2. EMS: **Yes (Paramedic)**
 - B1.3. Heavy Rescue: **Yes**
 - B1.4. HAZ MAT: **No**
 - B1.5. Water Rescue: **Yes**
 - B1.6. Ambulance: **Maybe** ; Transporting: **Maybe**
- B2. Training activities in building:
 - B2.1. **Classroom**
 - B2.2. **Ladders, confined space, other hands on**
- B3. Training activities on site:
 - B3.1. **Burn simulation trailer (8x40' closed) [can be securely locked & stay outdoors]**
- B4. Other uses of apparatus bay:
 - B4.1. Social events: **No**
 - B4.2. Craft fairs: **No**
 - B4.3. Other: **No**
- B5. Sleeping Over:
 - B5.1. Short term: **1 night during storms (folding cots)**
 - B5.2. Long term: **Career firefighters**
- B6. Standing by :
 - B6.1. Daily: **No**
 - B6.2. Emergency: **During weather emergencies**
 - B6.3. Outsiders: **Possible (10 people, a ladder & engine)**
- B7. Emergency Shelter:
 - B7.1. Who stays in building: **Maybe**
 - B7.2. Special needs: **No**
 - B7.3. Special storage: **No**
- B8. Firematic Business:
 - B8.1. Describe: **Fire & ALS- Possible EMS (by Firematic officers)**
- B9. Social Business:
 - B9.1. Describe: **Various activities- Dinners & banquets (by companies)**
- B10. Other: **No auxiliary**
- B11. Meetings:

- B11.1. Type: **6 Company meetings** ; size: **20-50** ; frequency: **7 meetings/month (one for each company & association)**
- B11.2. Type: **Committee** ; frequency: **random**
- B11.3. Type: **Trustee**; size: **15**; frequency: **1/month**
- B11.4. Type: **Officer**; size: **15**; frequency: **1/month**
- B11.5. Type: **Union**; size: **24**; frequency: **1/month**
- B11.6. Type: **Association**; size: **180 max**; frequency: **1/month**
- B12. Social Life:
 - B12.1. Daily recreation – describe: **P.T.- Possible weight room and hoop in bay**
 - B12.2. Periodic recreation – describe: **As space allows (clam bake)**
 - B12.3. Outdoor recreation – describe: **As space allows, pavilion (picnic)**
- B13. Access control:
 - B13.1. Electronic access: **Yes**
 - B13.2. Vendor's access to drop off material: **Maybe**
 - B13.3. Will other fire companies park their apparatus in the bay under certain circumstances: **Yes**
 - .13.3.1. Describe: **Mutual Aid**
 - .13.3.2. Is their access to the building to be limited: **Yes**
 - .13.3.3. Describe: **Access to all areas is not necessary**

C Site **TBD**

- C1. landscape elements: **Possible bell. 52" dia, 5,000 lb on 20' tall garden tower.**
- C2. Number of primary responder parking spaces needed : **As many as site will allow**
 - Recreation requirements (Pavilion, grill, patio, etc.): **As site allows**
 - Training requirements: **As site allows**
- C3. Utilities in the street at site (if there is a lateral into the site, identify that as well):
 - C3.1. Water: **X**
 - C3.2. Sewer: **X**
 - C3.3. Storm: **X**
 - C3.4. Electric: **X**
 - C3.5. Gas: **X**
 - C3.6. Phone: **X**
 - C3.7. Cable: **X**
- C4. Electric company : **Con Ed**
- C5. Gas company: **Con Ed**
- C6. Telephone company: **Light Path**
- C7. Cable company: **Optimum**
- C8. Alarm/Security company: **Will desire**

APPARATUS

1 Apparatus Bays

- 1.1 Number of vehicles: **12** ; # of bays: **10**
 - 1.1.1 Name: **130** ; type: **Engine** ; length: **31'** ; width: **8'6"** ; frontline: **Y**
 - 1.1.2 Name: **131** ; type: **Engine** ; length: **30'** ; width: **8'6"** ; frontline: **Y**
 - 1.1.3 Name: **132** ; type: **Engine** ; length: **29'** ; width: **8'6"** ; frontline: **Y**
 - 1.1.4 Name: **133** ; type: **Engine** ; length: **30'** ; width: **8'6"** ; frontline: **Y**
 - 1.1.5 Name: **134** ; type: **Engine** ; length: **34'** ; width: **8'6"** ; frontline: **Y**
 - 1.1.6 Name: **TL 45** ; type: **Engine** ; length: **45'** ; width: **8'6"** ; frontline: **Y**
 - 1.1.7 Name: **39m1** ; type: **Fly car** ; length: **17'** ; width: **6'** ; frontline: **Y**
 - 1.1.8 Name: **39m2** ; type: **Fly car** ; length: **17'** ; width: **6'** ; frontline: **Y**
 - 1.1.9 Name: **U17** ; type: **Utility** ; length: **19'** ; width: **8'6"** ; frontline: **N**
 - 1.1.10 Name: **1404** ; type: **Arson Vehicle** ; length: **21'** ; weight: **8'** ; frontline: **N**
 - 1.1.11 Name: **Spare 1** ; type: **TBD** ; length: _____ ; weight: _____ ; frontline: _____
 - 1.1.12 Name: **Spare 2** ; type: **TBD** ; length: _____ ; weight: _____ ; frontline: _____
- 1.2 Type of bays:
 - 1.2.1 Drive-through: **X** ; quantity: **what site allows (2)**
 - 1.2.2 Double deep: **X** ; quantity: **what site allows (2)**
 - 1.2.3 Single deep: **X** ; quantity: **8**
- 1.3 Wash bay: **X** ; Where: **Wash in one bay**
- 1.4 Plan for future expansion of bays: **No**
- 1.5 Overhead doors:
 - 1.5.1 Front:
 - 1.5.1.1 Number: **10**
 - 1.5.1.2 Width: **14** ; Height: **14**
 - 1.5.1.3 Windows: **Yes**
 - 1.5.2 Rear:
 - 1.5.2.1 Number: **2**
 - 1.5.2.2 Width: **14** ; Height: **14**
 - 1.5.2.3 Windows: **Yes**

- 1.6 Pedestrian doors:
 - 1.6.1 Number: **Whatever is required**
 - 1.6.2 Locations: **Where they are needed**
- 1.7 Number of gear lockers: **60** ; now: **30** ; later: **30**
 - 1.7.1 Location: **20 on apparatus wall for volunteers, 25 lockable in career gear locker room**
 - 1.7.2 Locker size: **18" W x 24" D**
 - 1.7.3 Ducted air for gear drying tubes: **Yes**
 - 1.7.4 Air for boot drying: **Yes**
- 1.8 Signage requirements: **Plasma**
- 1.9 Trench drains: **Yes** ; Layout: **Center line of trucks (one is 8" at designated location for washing)**
- 1.10 Wall mounted hose reels: **Yes** ; Quantity: **1 per 2 vehicles**; Tempered: **Yes**
- 1.11 Fume exhaust: **Yes** ; Type: **TBD** ; Later: **Now**
- 1.12 Truck fills:
 - 1.12.1 Wall hydrant: **Yes** ; Quantity: **2 or 3 based on bay size & layout**
 - 1.12.2 Outdoor hydrant: **Yes** ; Quantity: **1**
- 1.13 Overhead electrical drops: **Yes** ; Quantity: **All**
- 1.14 Overhead airdrops: **Yes** ; Quantity: **All**
- 1.15 Compressed air for tools: **Yes (in work room)**
- 1.16 Sinks: **Yes** ; Where: **TBD (maybe 2)**
- 1.17 Drench shower: **Yes**
- 1.18 Water Fountain: **Yes**
- 1.19 Other equipment: **None**
- 1.20 Epoxy flooring: **Yes**
- 1.21 Wall construction type: **Concrete block**
- 1.22 Size: **7048 sq ft**

FIREMATIC SUPPORT

1A Mezzanine

- 1A.1 Size: **60 x 16** ; or **960** sq ft

2 Storage Room #1

- 2.1 Use: **Miscellaneous firefighting equipment**
- 2.2 Size: **200** sq ft

3 Storage Room #2

- 3.1 Use: **Out of service bunker gear**
- 3.2 Size: **200** sq ft

4 Storage Room #3

- 4.1 Use: **TBD**
- 4.2 Size: **200 sq ft**

5 Storage Room #4

- 5.1 Use: **TBD**
- 5.2 Size: **200 sq ft**

6 Career Bunker Gear Storage Room

- 6.1 Location: **Where it fits- near apparatus room**
- 6.2 Number of Lockers: **25**
- 6.3 Locker Type: **Enclosed, 18" w x 24" deep**
- 6.4 Size: **211 sq ft**

7 Hose Storage

- 7.1 A room, or on the floor: **Room**
- 7.2 Equipment: **Racks, washer, dryer & winder**
- 7.3 Size: **203 sq ft**
- 7.4 Adjacencies: **Apparatus floor**

8 EMS Storage Room

- 8.1 Security: **Absolutely**
- 8.2 Size: **103 sq ft**
- 8.3 Adjacencies: **Apparatus bay**
- 8.4 Comments: **5 oxygen bottles**

9 Engineers Work Room

- 9.1 Mechanic: **Yes**
- 9.2 Workbench: **Yes**
- 9.3 Tool storage: **Yes**
- 9.4 Stationary power tools: **Yes**
- 9.5 Air: **Yes**
- 9.6 Water: **Yes**
- 9.7 Flammable Storage : **Yes**
- 9.8 Location: **Wherever it fits**
- 9.9 Size: **261 sq ft**
- 9.10 Adjacencies: **Apparatus bay**

10 DeCon/Laundry

- 10.1 Sink(s): **Yes** ; Foot Pedal
- 10.2 Gear washer/extractor: **Yes**
- 10.3 Gear dryer: **Yes**
- 10.4 Residential type clothes washer & dryer: **Yes**
- 10.5 Ventilated gear racks: **Yes**
- 10.6 Drench shower: **Yes** ; Where: **Decon**
- 10.7 Backboard/Etc. cleaning: **Not necessary**
- 10.8 Holding tank: **Yes if Decon is possible**
- 10.9 Red bag storage cabinet: **No**

11 Hazardous Waste Disposal

- 11.1 Size: **11 sq ft**
- 11.2 Adjacencies: **Ems storage, Decon**

12 SCBA Compressor Room

- 12.1 Sound attenuation panels: **Yes**
- 12.2 External feed lines: **Yes**
- 12.3 Size: **90 sq ft**
- 12.4 Comments: **Wall to fill station room may not get built initially if they continue to use the existing unitary system**

13 SCBA Fill Station Room

- 13.1 “Public” access: **No**
- 13.2 Filling station: **Yes**
- 13.3 Size: **85 sq ft**

14 SCBA Cleaning & Repair Room

- 14.1 Sink: **Yes**
- 14.2 SCBA storage: **Yes**
- 14.3 SCBA repair: **Yes**
- 14.4 Air Bottles – Size & Quantity: **80- 30 minutes/ea**
- 14.5 Size: **71 sq ft**

15 Janitor’s Closet

- 15.1 Size: **64 sq ft**

16 Apparatus Floor Rest Rooms

- 16.1 Quantity: **2, Unisex**
- 16.2 Fixture: **Sink, toilet & urinal**
- 16.3 Showers: **No**
- 16.4 Lockers: **No**
- 16.5 Size: **75 sq ft**

17 Radio Room

- 17.1 Location: **Central location**
- 17.2 View control: **Maximum view**
- 17.3 Seating for how many: **2**
- 17.4 Door operator switches: **Yes**
- 17.5 Traffic device control: **If needed**
- 17.6 Light switches for app bay: **Yes ; Outside: Yes**
- 17.7 Internal paging system: **Yes**
- 17.8 Computer equipment: **Yes**
- 17.9 File cabinets: **Yes**
- 17.10 Rechargeable items (flashlights, plectrons): **Yes**
- 17.11 Lockable storage: **Yes**
- 17.12 Assumed minimum size: **114 sq ft**

<h2>ADMINISTRATION</h2>

18 Firefighter's Lobby

- 18.1 Lobby Size: **220 sq ft**

19 Conference Room

- 19.1 Uses: **Multiple**
- 19.2 Seat how many: at table: **12**; at wall: **16**
- 19.3 Is there a workstation with a computer to be shared by all users: **Yes**
- 19.4 Size: **447 sq ft**

20 Chiefs' Office

- 20.1 Seat how many: **3**
- 20.2 Size: **247 sq ft**

21 Volunteer Line Officers

21.1 Seat how many: **5**

21.2 Size : **221 sq ft**

22 Career Staff Office

22.1 Name of Occupant: **Union, Paramedic, Shift Supervisors, Safety Officer**

22.2 Size: **221 sq ft**

23 Department Surgeon

23.1 Seat how many: **1**

23.2 Is there a workstation with a computer: **Yes**

23.3 Size: **103 sq ft**

23.4 Comments: **Scale, sink, exam room**

24 Association Office

24.1 Seat how many: **1**

24.2 Is there a workstation with a computer: **Yes**

24.3 Size: **81 sq ft**

25 Fire Prevention & Fire Training Office

25.1 Size: **100 sq ft**

25.2 Comments: **Storage also**

26 Records Storage

26.1 Size: **98 sq ft**

<h1>FIREFIGHTERS</h1>

27 Firefighter's Recreation Room

27.1 Uses: **Multiple Uses**

27.1.1 **Quiet area**

27.1.2 **Game area**

27.1.3 **T-V area**

27.1.4 **Bar area**

27.2 Number of chair seating: **70**

27.3 Couch: **Yes** ; seats how many: **What space allows**

27.4 TV: **X** ; Size: **Large Screen**

27.5 Card table: **X** ; how many: **As space allows**

27.6 Coffee maker: **X**

- 27.7 Microwave: **X**
- 27.8 Popcorn maker: **X**
- 27.9 Bulletin board: **X** ; Size: **Several**
- 27.10 Size: **1194**sq ft

28 Day Room

- 28.1 Kitchen/Kitchenette: **X**
- 28.2 Dining/Eating: **X**
- 28.3 Living/T-V: **X**
- 28.4 Total Day Room Size: **823** sq ft

29 Firefighters' Rest Rooms

- 29.1 Size: **271** sq ft

30 Exercise

- 30.1 Size: **1,000** sq ft
- 30.2 Equipment:
 - 30.2.1 Cardio: **X**
 - 30.2.2 Weights: **X**
 - 30.2.3 Weight Machines: **X**

31 Lockers/Bath

- 31.1 Showers: **Yes**
- 31.2 Lockers: **Yes**
- 31.3 Size: **535** sq ft

BUNKING

32 Single Bed Rooms

- 32.1 Number of rooms: **6**
- 32.2 Beds per room: **1**
- 32.3 Storage: **One unit**
- 32.4 Desks: **yes**
- 32.5 Size: **(6) @ 88** sq ft

33 Double Bed Rooms

- 33.1 Number of rooms: **4**
- 33.2 Beds per room: **2**

- 33.3 Storage: **2 units**
- 33.4 Desks: **yes**
- 33.5 Size: **(4) @ 139** sq ft

34 Bunker's Bathrooms

- 34.1 Quantity: **2**
- 34.2 Details: **Toilet, urinal, shower & sink**
- 34.3 Size: **(2) @ 88** sq ft
- 34.4 Comments: **In vicinity (immediate)**

35 Career Personnel Lockers

- 35.1 Size: **381** sq ft
- 35.2 Comments: **designed to allow 42 lockers**

36 Career Laundry Room

- 36.1 Size: **52** sq ft
- 36.2 Comments: **Stacking washer & dryer**

<h2>PUBLIC SPACES</h2>

37 Public Entry Area

- 37.1 Trophy case: **Yes**
- 37.2 Bulletin board: **Yes**
- 37.3 Plaque: **Yes**
- 37.4 Lobby Size: **266** sq ft

38 Coat Room

- 38.1 Number of coats: **260 for 300 occupancy**
- 38.2 Size: **204** sq ft

39 Museum

- 39.1 Uses: **Yes**
- 39.2 Size: **1578** sq ft
- 39.3 Comments: **Multiple- hand drawn**

40 Meeting/Training Room

- 40.1 Public access: **Yes**
- 40.2 Uses:
 - 40.2.1 Department meetings: **Yes**
 - 40.2.2 Training: **Yes**
 - 40.2.3 Fundraising dinners: **Yes**
 - 40.2.4 Political/Municipal: **Yes**
 - 40.2.5 Boy Scouts or other similar groups: **Possibly**
 - 40.2.6 Rental: **No**
- 40.3 Purpose: **Various**
 - 40.3.1 Seating: **300**
- 40.4 Trophy case: **Yes**
- 40.5 Whiteboard: **Yes**
- 40.6 Bulletin board: **Yes**
- 40.7 TV: **Yes**; where stored: **ceiling?**
- 40.8 Size: **4,500** sq ft
- 40.9 Comments: **Needs a divider**

41 Meeting/Training Room Table & Chair Storage

- 41.1 Table rack quantity: **5 rectangle & 4 round**
- 41.2 Chair rack quantity: **16**
- 41.3 Size: **446** sq ft

42 Meeting/Training Room A/V Equipment

- 42.1 Size: **130** sq ft

43 Kitchen

- 43.1 Uses: **Commercial**
- 43.2 Equipment types and size:
 - Refrigerator: **Yes**
 - Sink(s) Pot: **Yes**; Hand: **Yes**; Scrub: **Yes**; Disposal: **Yes**
 - Dishwasher: **Yes**
 - Stove: **Yes**
 - Oven: **Yes**
 - Cook top: **Yes**
 - Hood: **Absolutely**
 - Other equipment: **Ice machine**
- 43.3 Center Island: **Yes**
- 43.4 Shuttered opening: **Yes**

- 43.5 Door to exterior: **Yes**
- 43.6 Dish storage: **Yes**
- 43.7 Pantry/food storage: **Yes**
- 43.8 Locked storage: **Yes**
- 43.9 Automatic shut off of heat generating equip @ fire call w/ manual reset: **Yes**
- 43.10 Size: **400** sq ft

44 Pantry

- 44.1 Size: **237** sq ft
- 44.2 Comments: **(7) locked cabinets @ 2'x4' plus open shelving**

45 Public Rest Rooms

- 45.1 Handicapped accessible: **Yes**
- 45.2 Size: **360** sq ft

<h3>MISCELLANEOUS SPACES</h3>

46 Entry Vestibules (2)

- 46.1 Size: **Public entry @ 128 Firefighter entry @ 60** sq ft

47 House Keeping Storage

- 47.1 Size: **(1) per floor @ 50** sq ft

48 Janitors Closet

- 48.1 Size: **2nd & 3rd floor @ 50** sq ft
- 48.2 Comments: **Apparatus floor janitor closet covers 1st floor**

49 Generator

- 49.1 Size: **156** sq ft

50 File Server

- 50.1 Size: **80** sq ft

51 Mechanical, Electrical, Plumbing, HVAC, Sprinkler, Alarm, etc.

- 51.1 Fuel type at site: **Gas- Natural**
- 51.2 Heating type in apparatus bay: **Radiant Slab**
- 51.3 Heating type elsewhere: **Ducted hot & cold air**

- 51.4 Building to be sprinklered: **Yes**
 - 51.4.1 Adequate water pressure: **Yes**
 - 51.4.2 Storage tank: **No**
- 51.5 Hose bibs for exterior: **Yes**
- 51.6 Bay lighting type: **Fluorescent**
- 51.7 Site lighting type: **Sodium or equal**
- 51.8 Generator: **X** ; Describe: **To power whole building**
- 51.9 Location of generator: **TBD**
- 51.10 Circuits on generator: **All**
- 51.11 Security: **Yes**
- 51.12 Keyless entry: **Yes** ; Describe: **Swipe Card**
- 51.13 Alarm: **Yes**
- 51.14 Siren: **No**
- 51.15 Hazardous waste handling: **No**
- 51.16 Size: **360** sq ft

Peekskill Central Fire Station Space/Usage Analysis - 2nd Draft - 2 Story

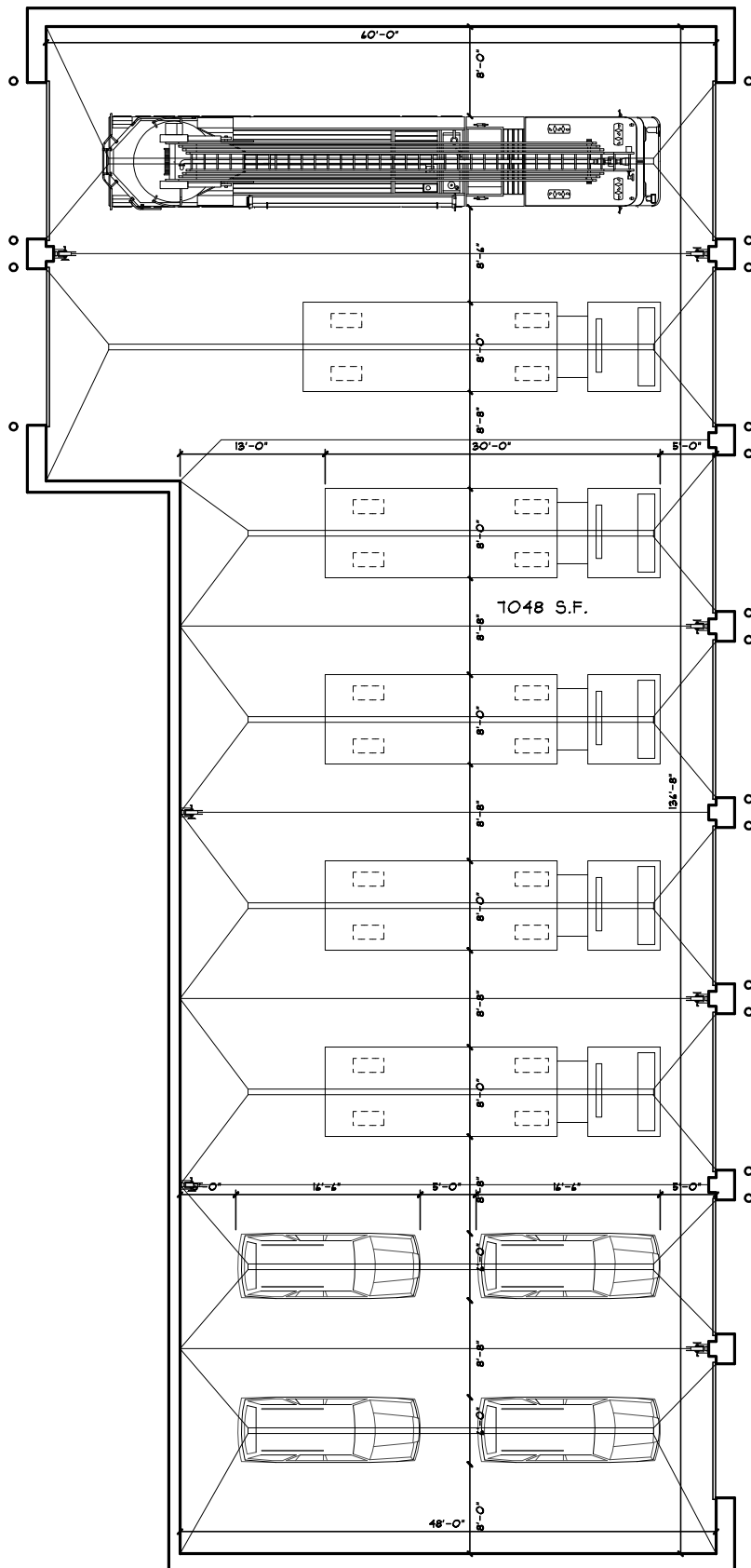
Program Item	Room Name	1st Floor Area	2nd Floor Area	3rd Floor Area	Area All Floors
	Apparatus Bay				
1	Apparatus Bay	7,048			7,048
	Subtotal - Apparatus Bay	7,048			7,048
	Firematic Support				
1.1	Mezzanine		960		960
2	Storage Room #1	200			200
3	Storage Room #2	200			200
4	Storage Room #3	200			200
5	Storage Room #4	200			200
6	Career Bunker Gear Storage	211			211
7	Hose Storage	203			203
8	EMS Storage	103			103
9	Engineers Work Room	261			261
10	DeCon/Laundry	234			234
11	Hazardous Waste Disposal	14			14
12	SCBA Compressor	90			90
13	SCBA Fill	85			85
14	SCBA Cleaning & Repair	71			71
15	Janitor's Closet	64			64
16	Apparatus Floor Uni-Sex ADA Rest Room	150			150
17	Radio Room/Watch Desk	114			114
	Subtotal - Firematic Support	2,400			2,400
	Administration				
18	Firefighter's Lobby	220	0	0	220
19	Conference Room	447	0	0	447
20	Chief's Office	247	0	0	247
21	Volunteer Line Officers	221	0	0	221
22	Career Staff Office	221	0	0	221
23	Department Surgeon	103	0	0	103
24	Association	81	0	0	81
25	Fire Prevention & Training	100	0	0	100
26	Records Storage	98	0	0	98
	Subtotal - Administration	1,738	0	0	1,738
	Firefighters				
27	Firefighter's Recreation Room	0	1,194	0	1,194
28	Day Room	823	0	0	823
29	Firefighter's Restroom	271	0	0	271
30	Exercise	1,000	0	0	1,000
31	Lockers & Showers	535	0	0	535
	Subtotal - Firefighters	2,629	1,194	0	3,823
	Bunking				
32	Single Bedrooms (6 @ 88 sq ft)	528	0	0	528
33	Double Bedrooms (4 @ 139 sq ft)	556	0	0	556
34	Bunkers Bathrooms (2 @ 88 sq ft)	176	0	0	176
35	Career Personnel Lockers	381	0	0	381
36	Career Laundry Room	52	0	0	52
	Subtotal - Bunking	1,693	0	0	1,693
	Public Spaces				
37	Public Entry Area	266	266	0	532
38	Coat Room	0	204	0	204
39	Museum	1,578	0	0	1,578
40	Meeting/Training Room	0	4,500	0	4,500
41	Meeting/Training Room Tables & Chairs	0	446	0	446
42	Meeting/Training Room A/V	0	130	0	130
43	Kitchen	0	400	0	400
44	Pantry	0	237	0	237
45	Public Rest Rooms M & F	0	360	0	360
	Subtotal - Public Spaces	1,844	6,543	0	8,387
	Miscellaneous Space				
46	(2) Entry Vestibules	188	0	0	188
47	Housekeeping Storage	50	50	0	100
48	Janitors Closet	0	50	0	50
49	Generator	156	0	0	156
50	File Server	0	80	0	80
51	Mechanical/Electrical	360	50	0	410
	Subtotal - Miscellaneous Spaces	754	230	0	984
	Vertical Circulation				
52	(3) Stairwells (area per floor)	522	462	0	984
53	Elevator (area per floor)	58	58	0	116
54	Elevator Equipment Room	82	0	0	82
55	Elevator Foyer	80	80	0	160
	Subtotal - Vertical Circulation	742	600	0	1,342

Room Name	1st Floor Area	2nd Floor Area	3rd Floor Area	Area All Floors
Area Subtotals				
Bay	7,048			7,048
Firematic Support	2,400			2,400
Mezzanine		960		960
Office & Living	9,400	8,567	0	17,967
Walls & Circulation				
Apparatus Bay Walls @ 9%	599			599
Firematic Support Walls @ 12%	288	1,000	0	1,288
Firematic Support Circulation @ 15%	360	1,251	0	1,611
Office Area Walls @ 22%	2,068	1,885	0	3,953
Office Area Circulation @ 18%	1,692	1,542	0	3,234
Subtotal - Walls & Circulation	5,007	5,678	0	10,685
Total >>	23,855	14,245	0	39,060

GrossArea				
Total Walls % >>>	12.4%	20.3%	#DIV/0!	15.0%
Total Corridor % >>>	8.6%	19.6%	#DIV/0!	12.4%

Appendix B

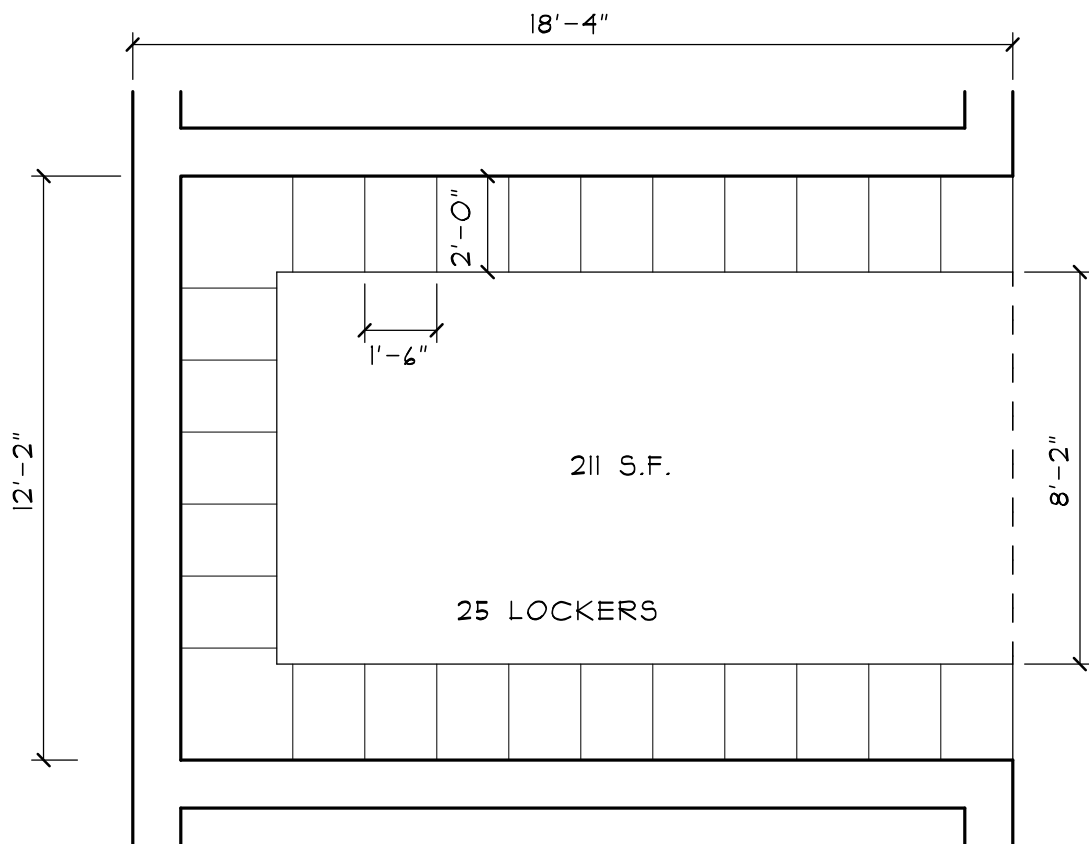
Diagrammatic Floor Plans



ROOM #1

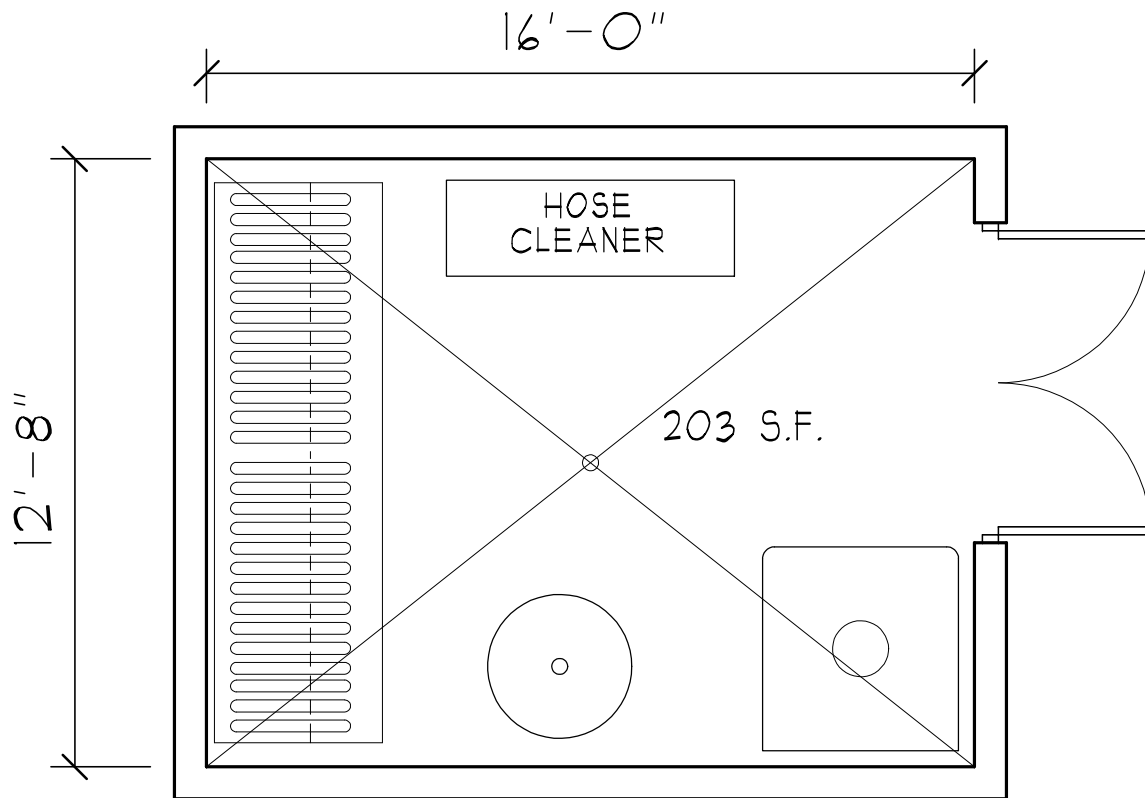
MITCHELL ASSOC. ARCHITECTS
APPARATUS BAY
PLOT DATE: 3/1/2008
SCALE: 1/16" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\I - Apparatus Bay

ROOM #6



MITCHELL ASSOC. ARCHITECTS
CAREER BUNKER GEAR
PLOT DATE: 3/18/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\6 - Bunker Gear Storage

ROOM #7



MITCHELL ASSOC. ARCHITECTS

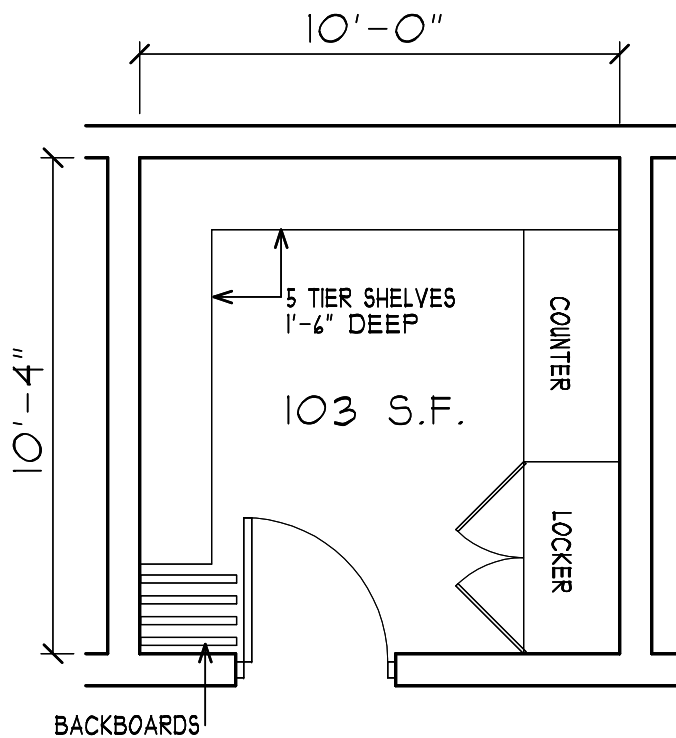
HOSE CLEANING & STORAGE

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1' - 0"

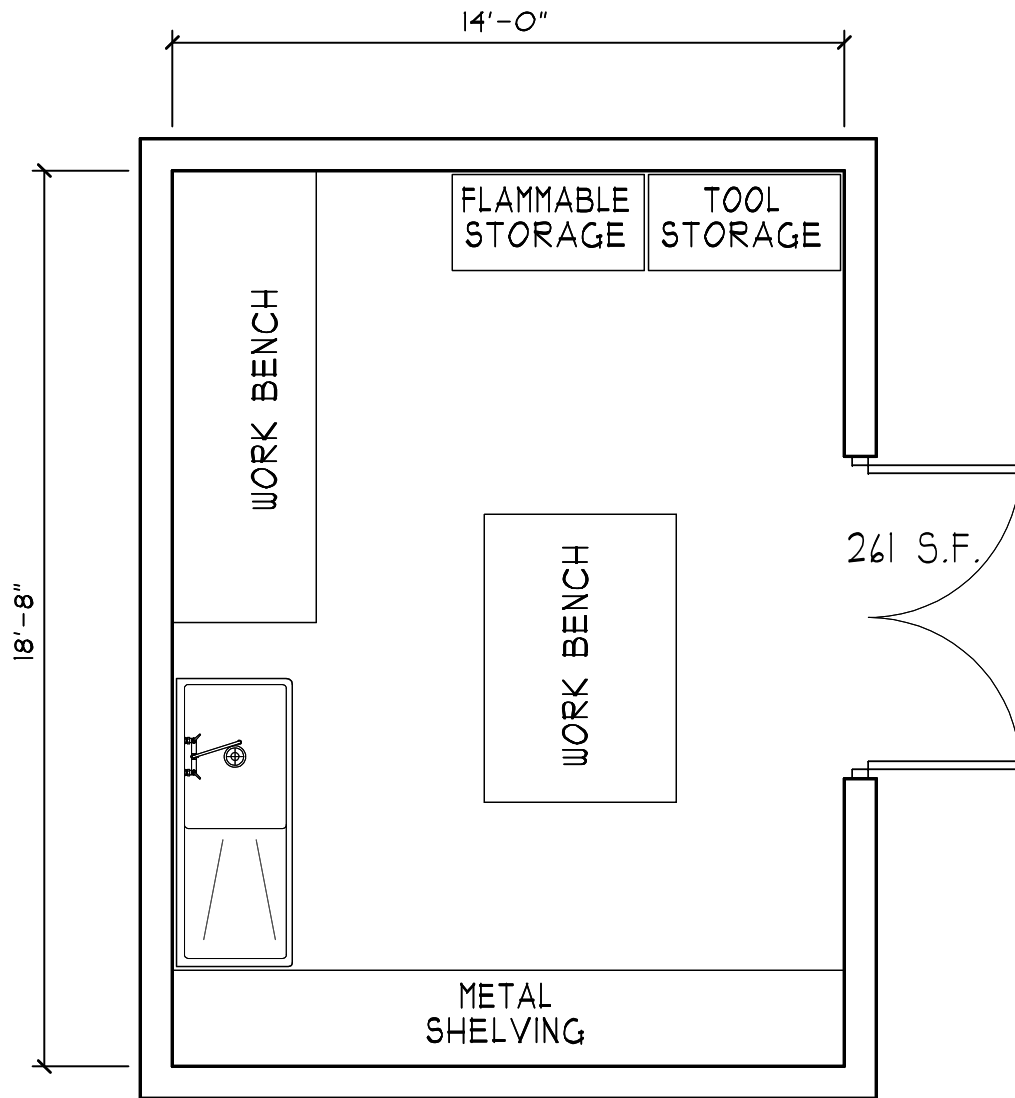
C:\Data\W Drive\Peekskill\Individual Rooms\1 - Hose Storage

ROOM #8



MITCHELL ASSOC. ARCHITECTS
EMS STORAGE
PLOT DATE: 3/18/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\8 - EMS Store Room

ROOM #9



MITCHELL ASSOC. ARCHITECTS

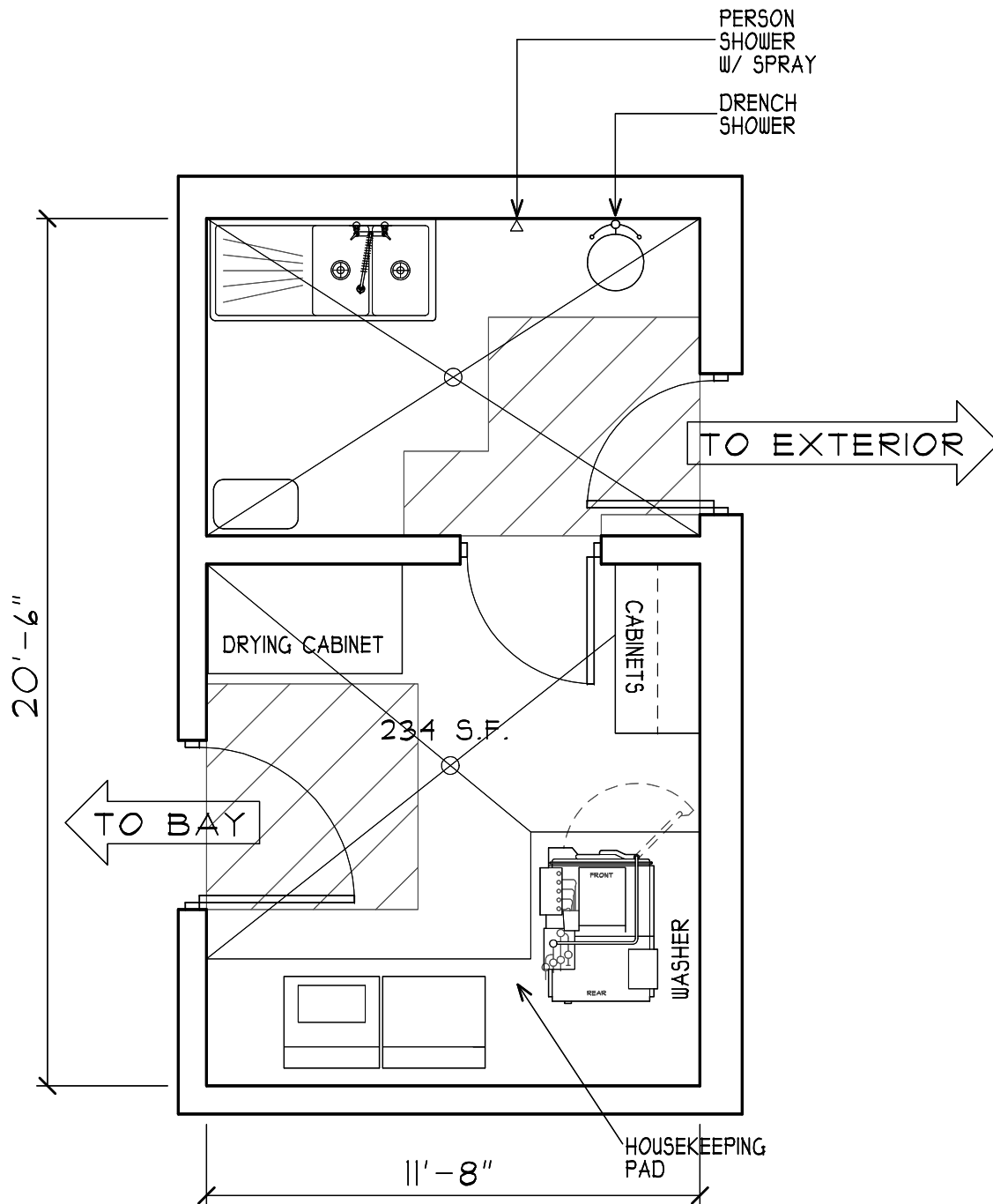
ENGINEER'S WORKROOM

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\9 - Engineers Work Room

ROOM #10



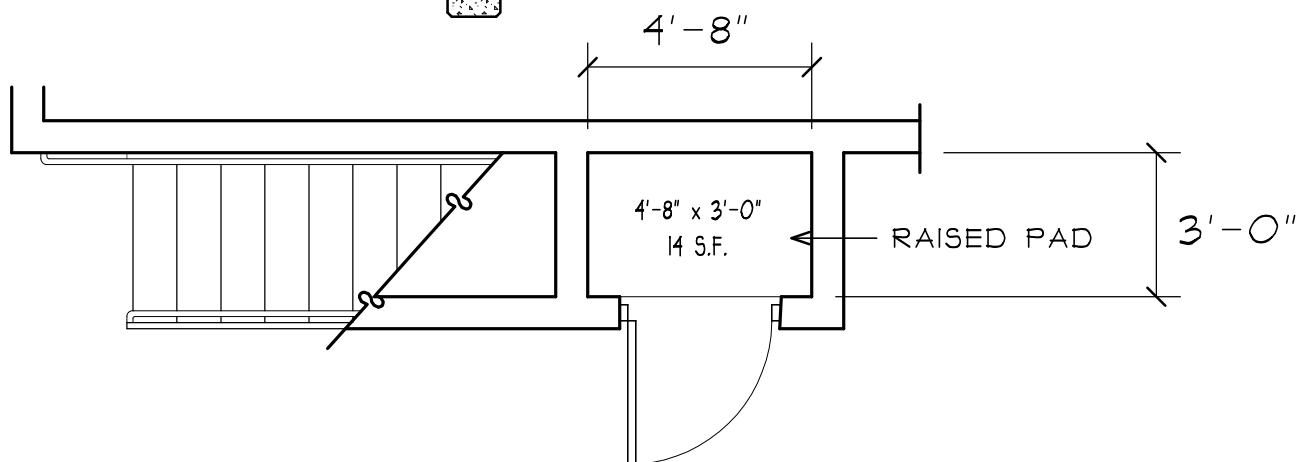
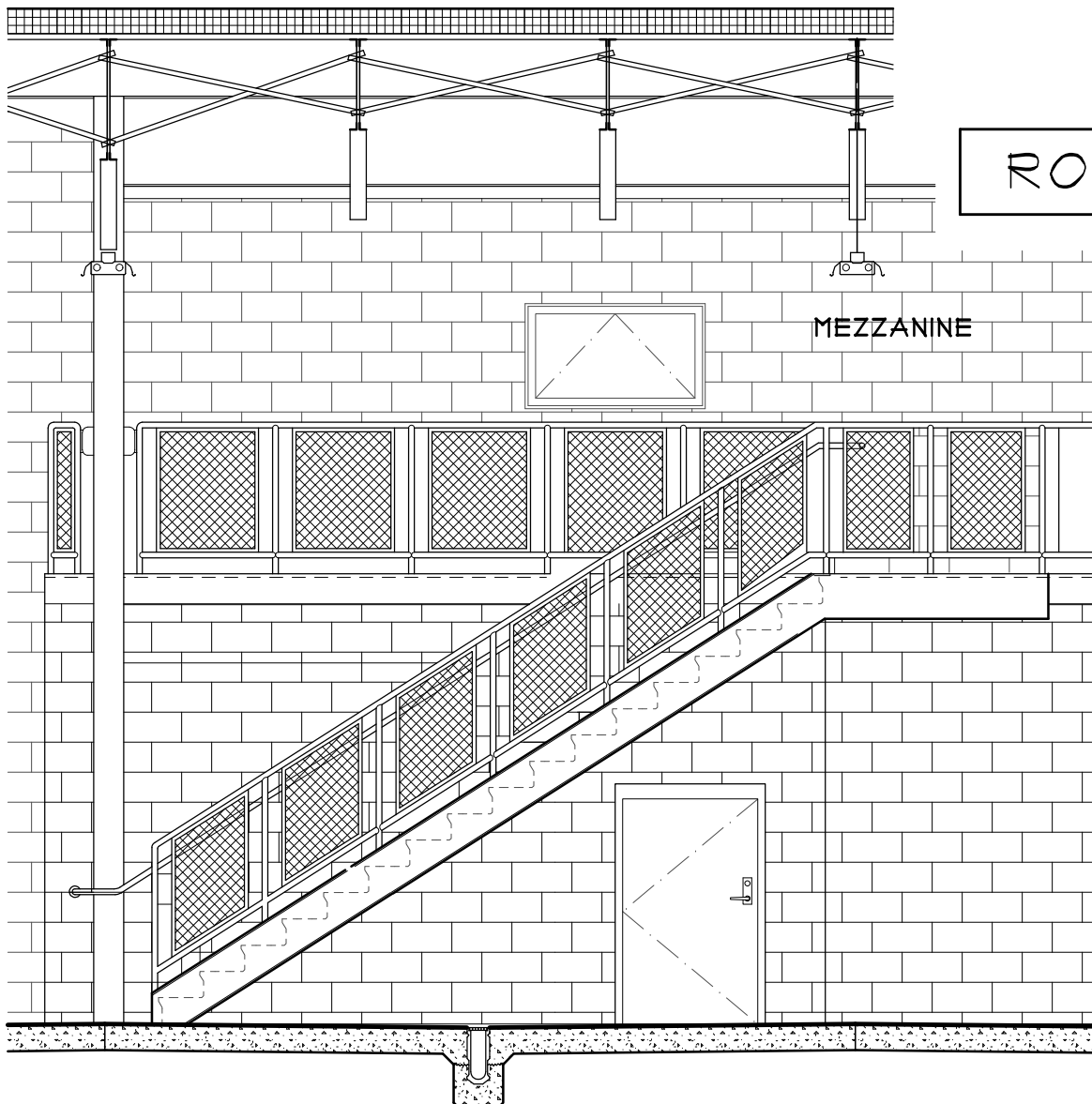
MITCHELL ASSOC. ARCHITECTS

DECON/LAUNDRY

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\10 - Decon



MITCHELL ASSOC. ARCHITECTS

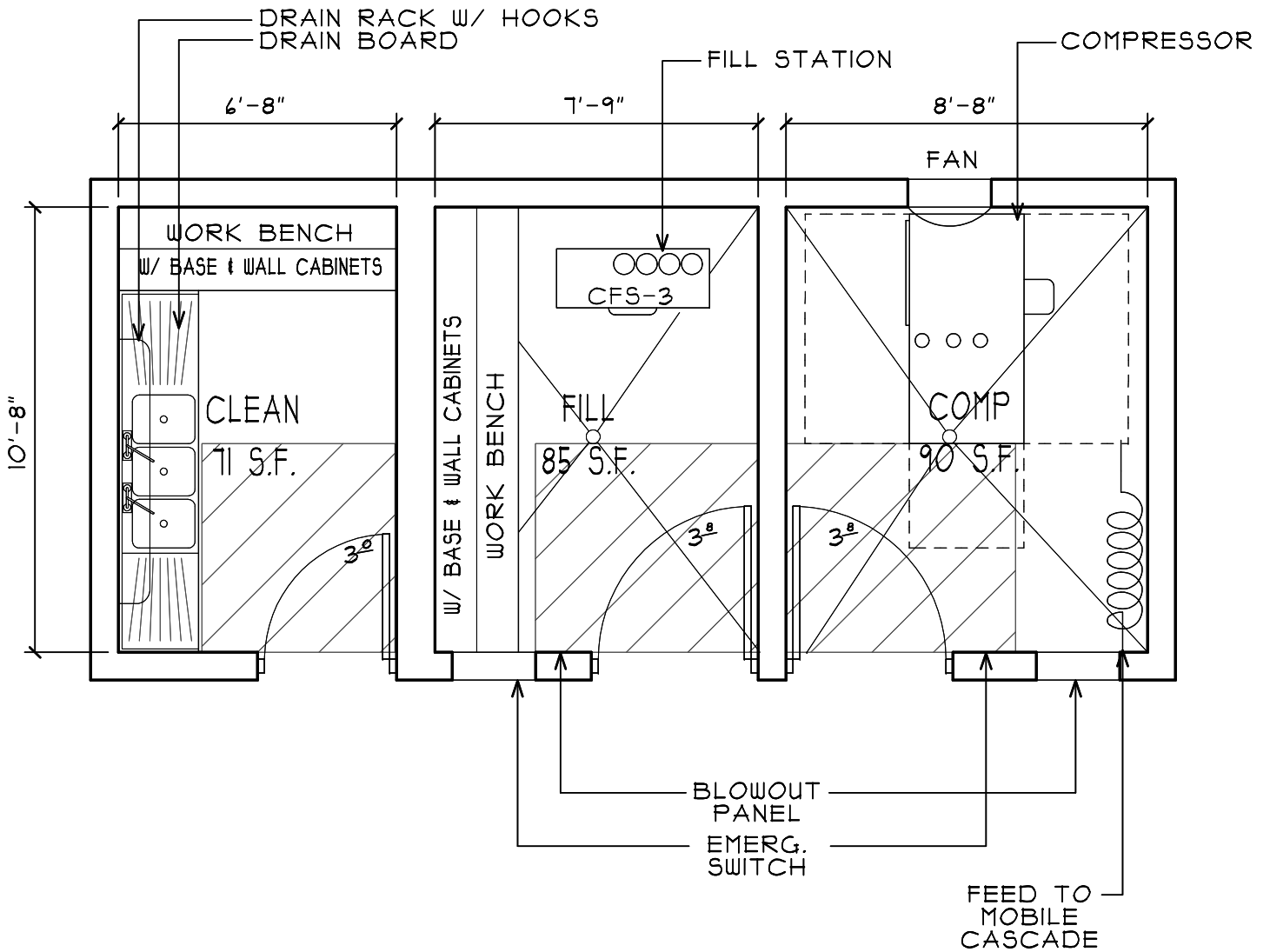
HAZARDOUS WASTE

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\11 - Hazardous Waste

ROOMS #12 & #13 & #14



MITCHELL ASSOC. ARCHITECTS

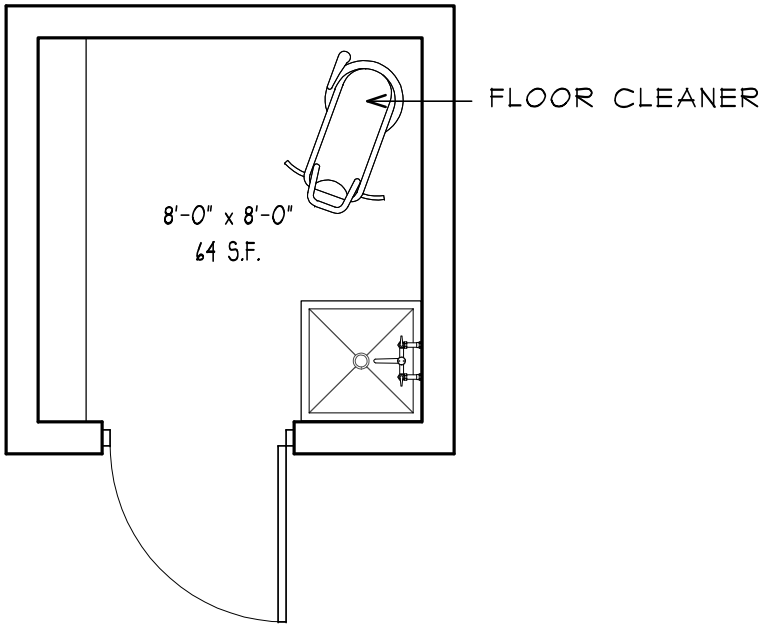
SCBA

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

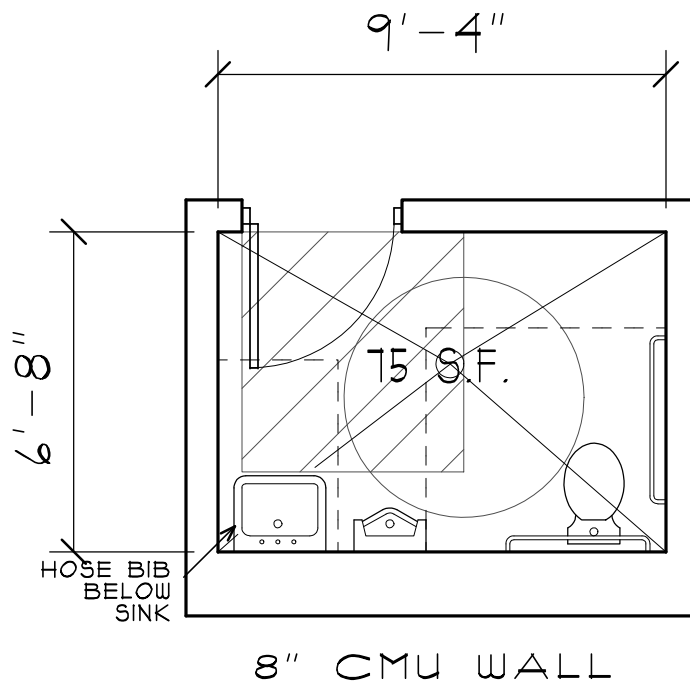
C:\Data\J Drive\Peekskill\Individual Rooms\12-14 - SCBA

ROOM #15



MITCHELL ASSOC. ARCHITECTS
JANITOR'S CLOSET
PLOT DATE: 3/18/2008
SCALE: 1/4" = 1'-0"
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ROOM #16



MITCHELL ASSOC. ARCHITECTS

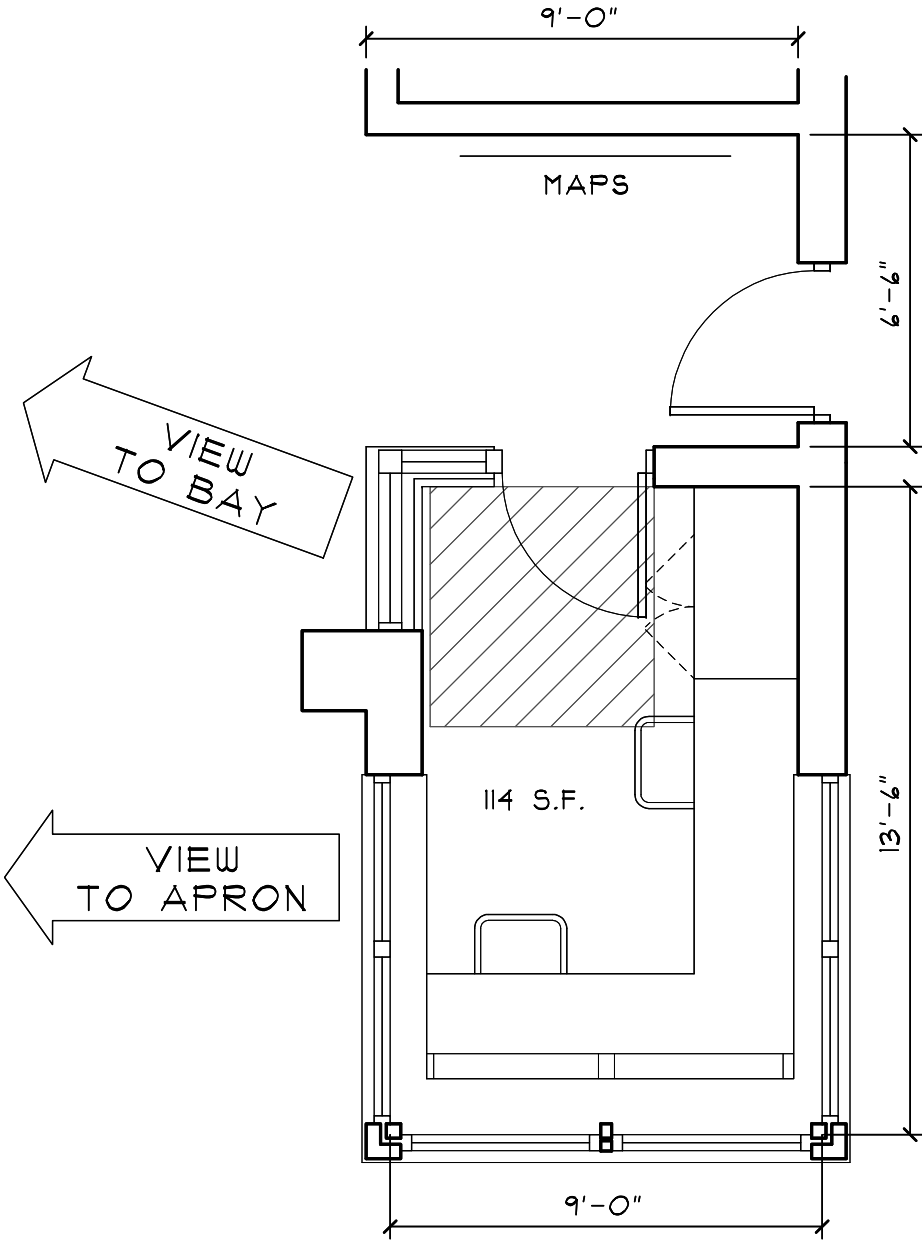
APPARATUS BAY BATHROOM

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peetskill\Individual Rooms\16 - Apparatus Rest Room

ROOM #17



MITCHELL ASSOC. ARCHITECTS
RADIO ROOM
PLOT DATE: 3/18/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\11 - Radio Room

RADIO ROOM

PLOT DATE: 3/18/2008

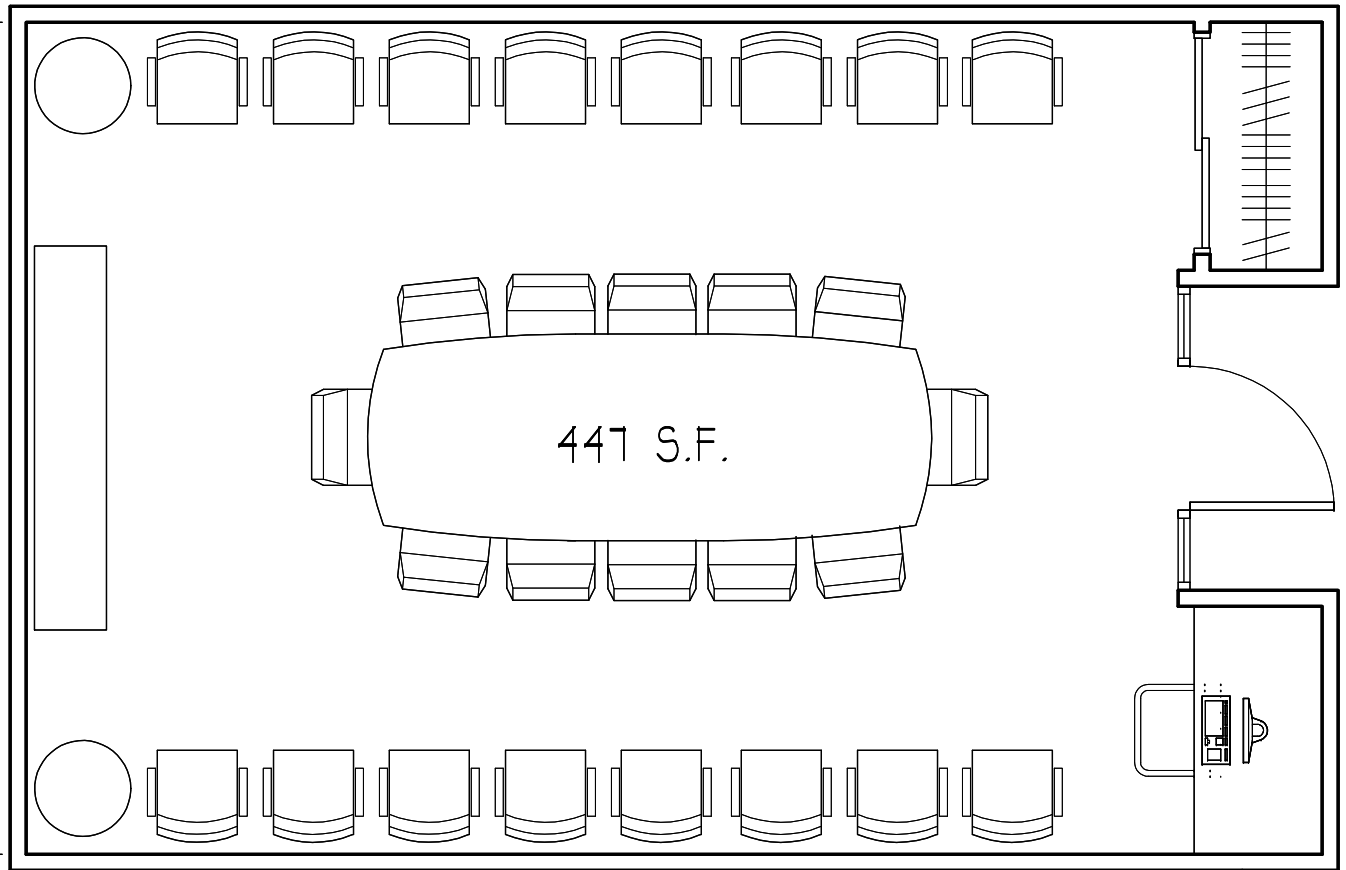
SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\17 - Radio Room

ROOM #19

27'-0"

17'-4"



MITCHELL ASSOC. ARCHITECTS

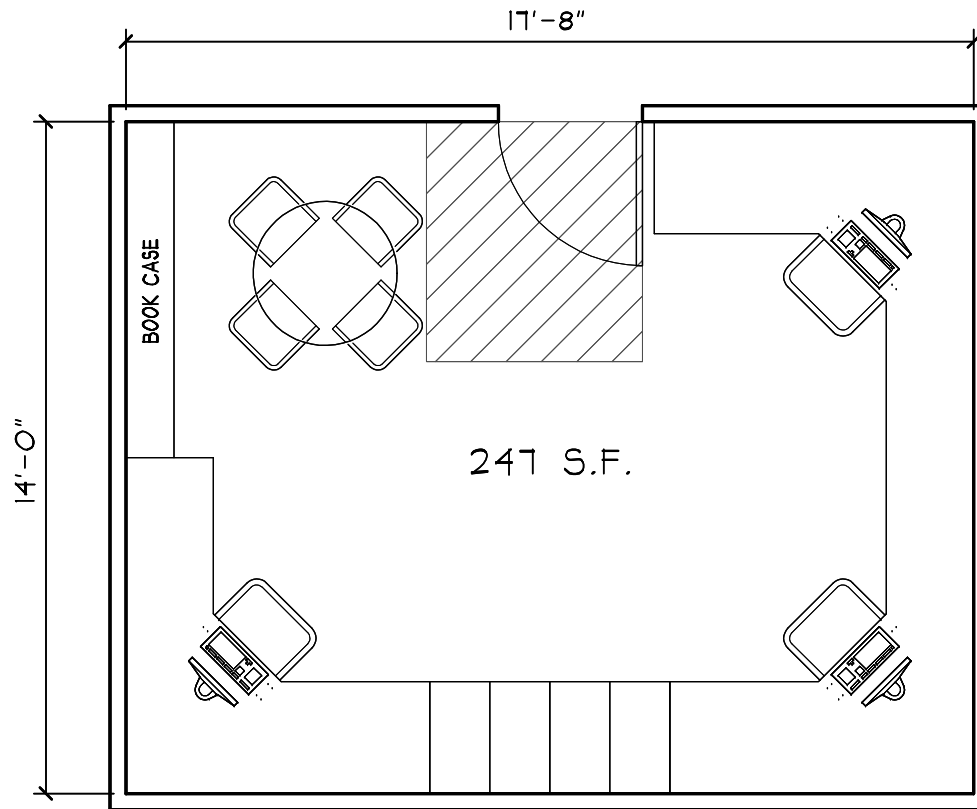
CONFERENCE ROOM

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

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ROOM #20



MITCHELL ASSOC. ARCHITECTS

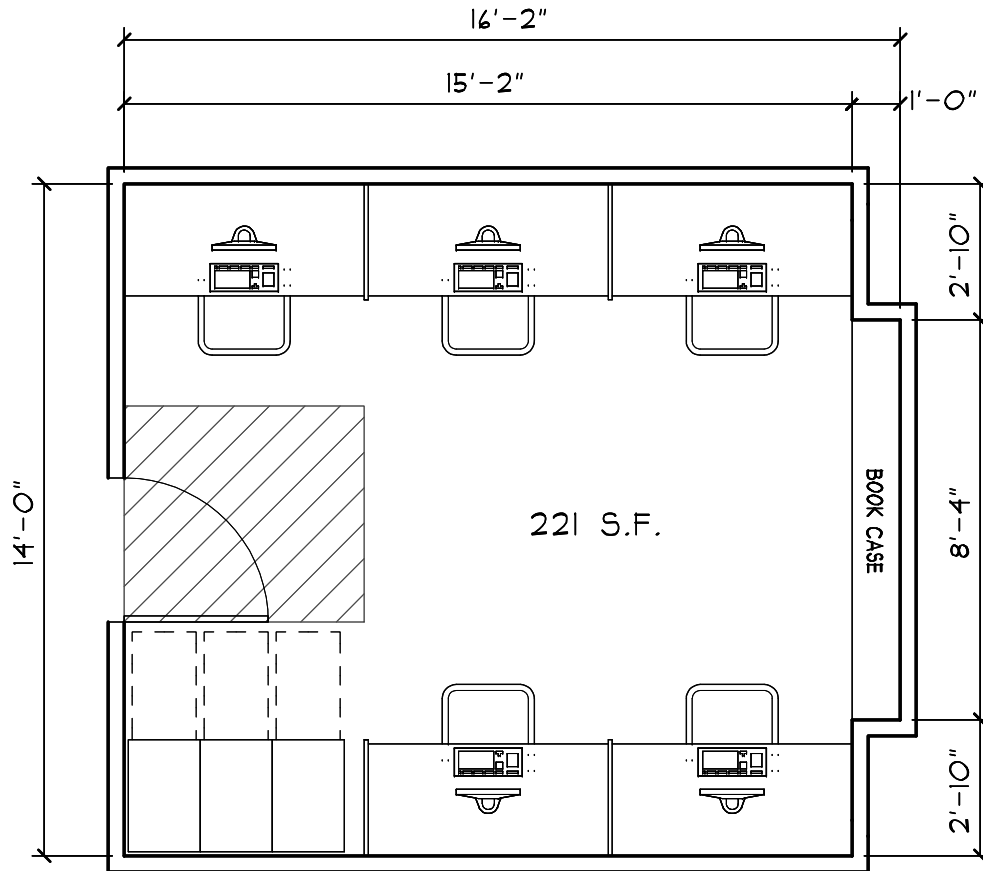
CHIEF'S OFFICE

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\20 - Chief

ROOM #21 & #22



MITCHELL ASSOC. ARCHITECTS

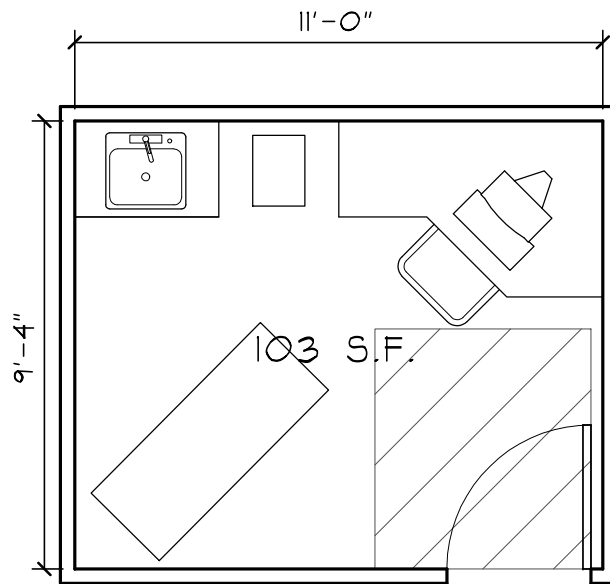
VOLUNTEER LINE OFFICERS
& CAREER STAFF OFFICE

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\21 & 22 -Vol Officers & Career Staff

ROOM #23



MITCHELL ASSOC. ARCHITECTS

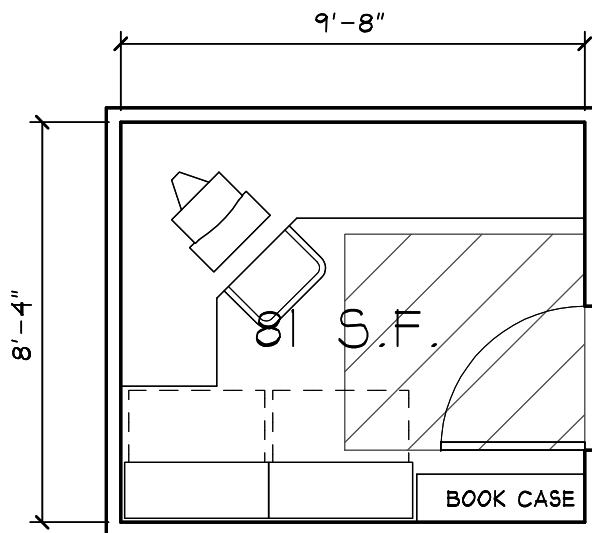
DEPARTMENT SURGEON

PLOT DATE: 3/19/2008

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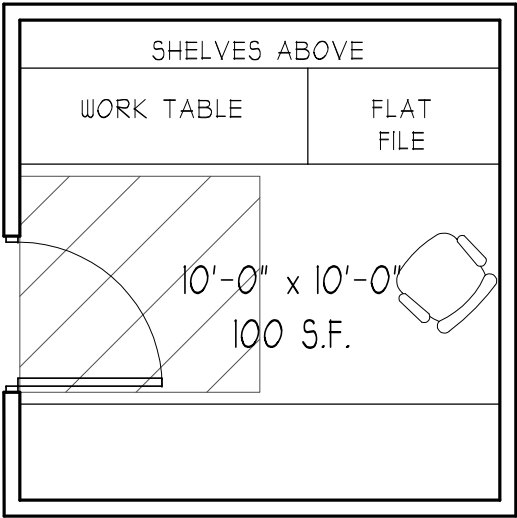
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ROOM #24



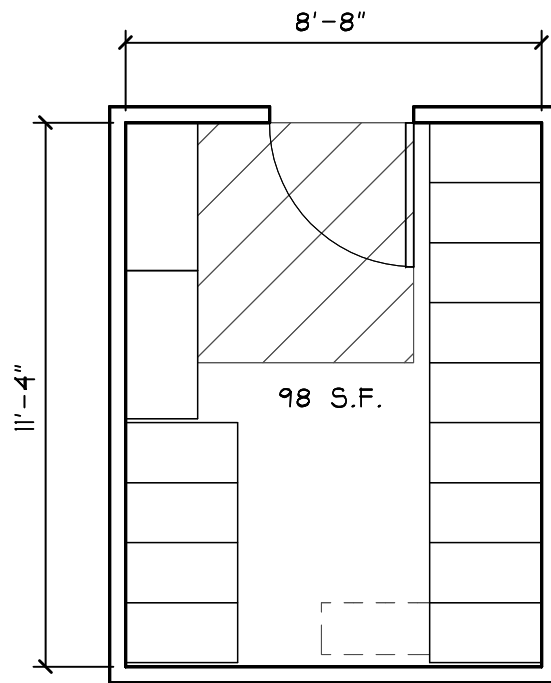
MITCHELL ASSOC. ARCHITECTS
ASSOCIATION OFFICE
PLOT DATE: 3/18/2008
SCALE: 1/4" = 1'-0"
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ROOM #25



MITCHELL ASSOC. ARCHITECTS
FIRE PREVENTION & TRAINING
PLOT DATE: 3/20/2008
SCALE: 1/4" = 1'-0"
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ROOM #26



MITCHELL ASSOC. ARCHITECTS

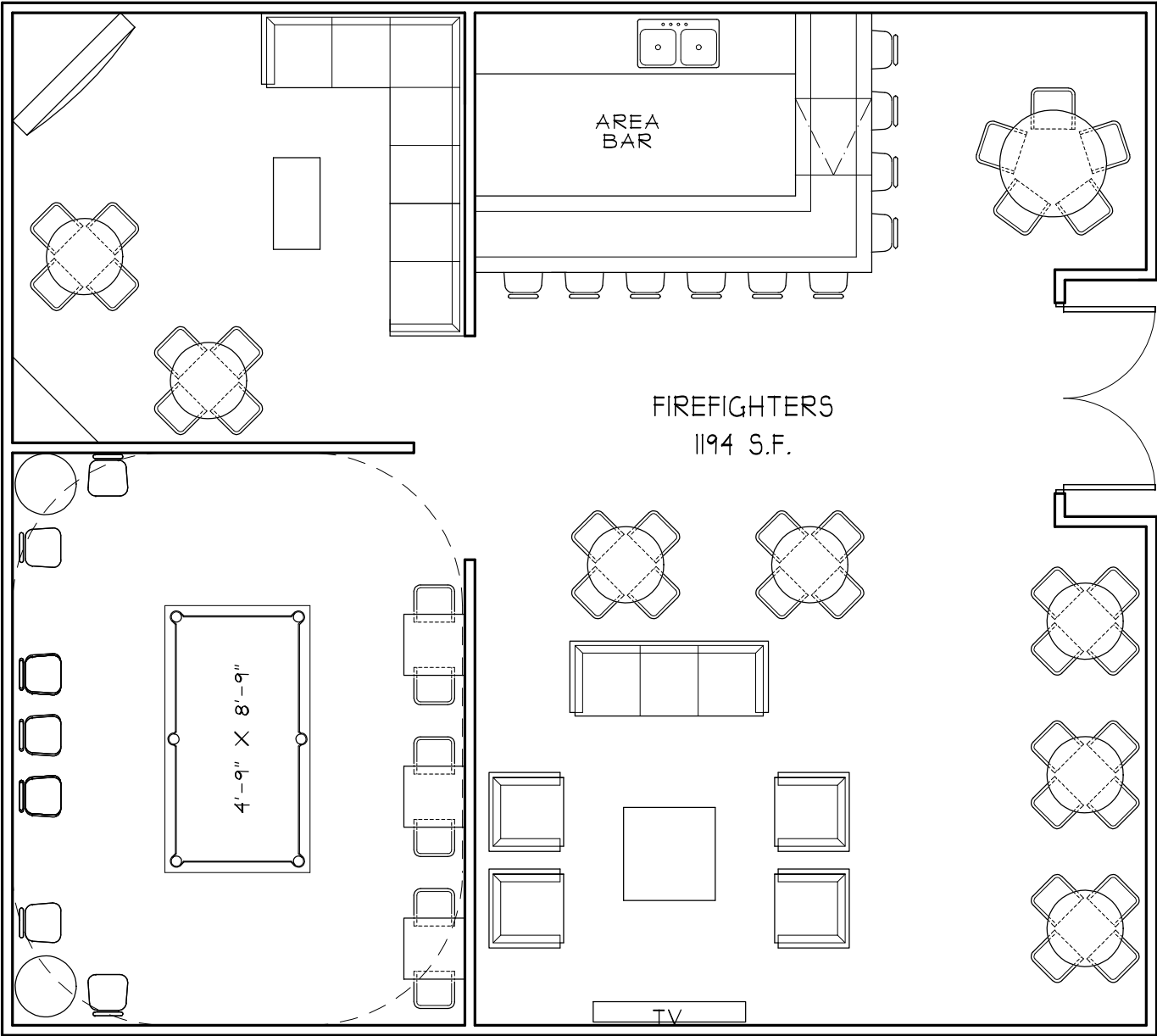
RECORDS STORAGE

PLOT DATE: 3/18/2008

SCALE: 1/4" = 1'-0"

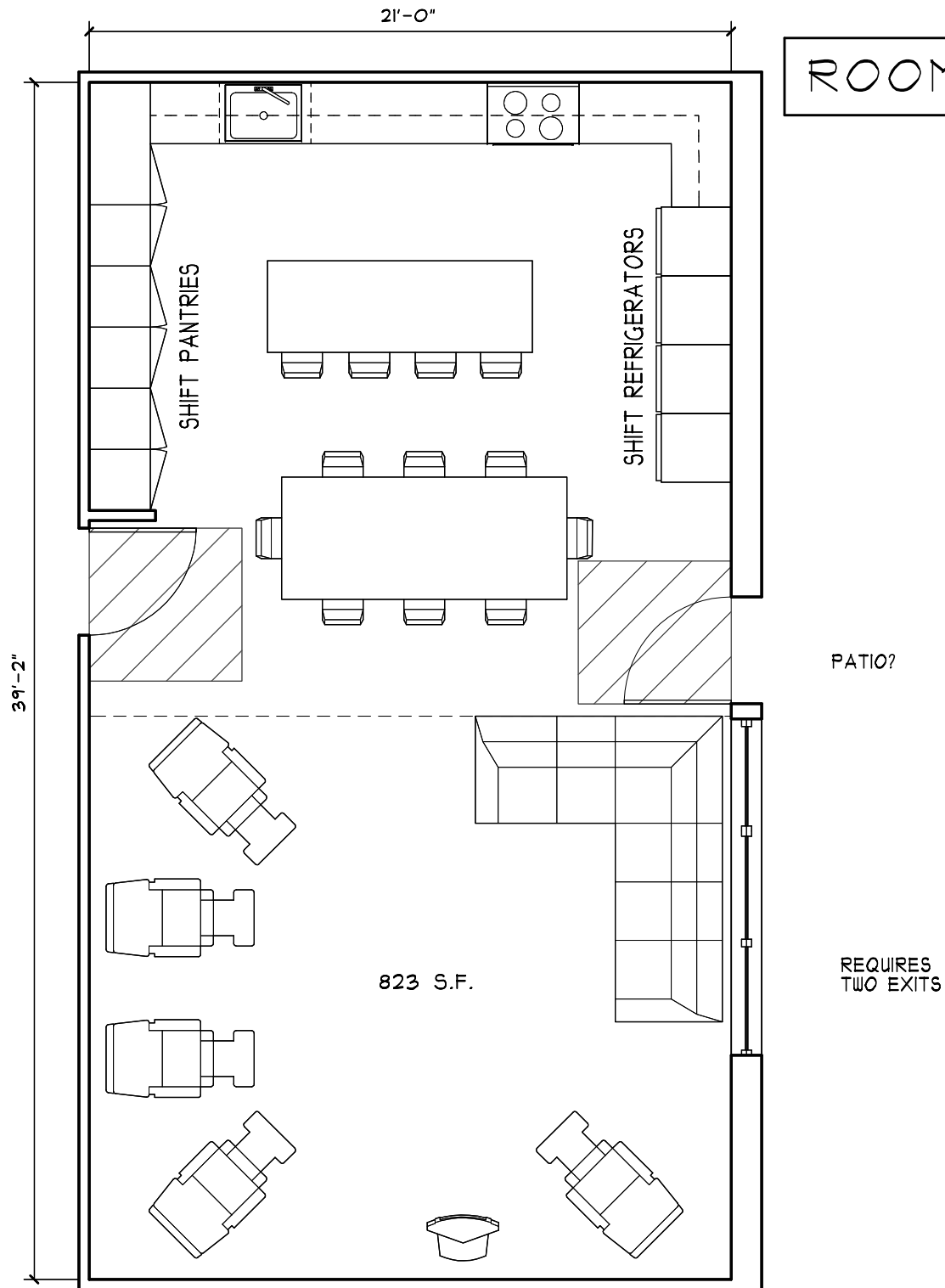
C:\Data\J Drive\Peekskill\Individual Rooms\26 - Records

ROOM #27



REQUIRES A SECOND
EXIT

MITCHELL ASSOC. ARCHITECTS
FIREFIGHTERS ROOM
PLOT DATE: 3/20/2008
SCALE: 3/16" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\27 - Firefighters Recreation



MITCHELL ASSOC. ARCHITECTS

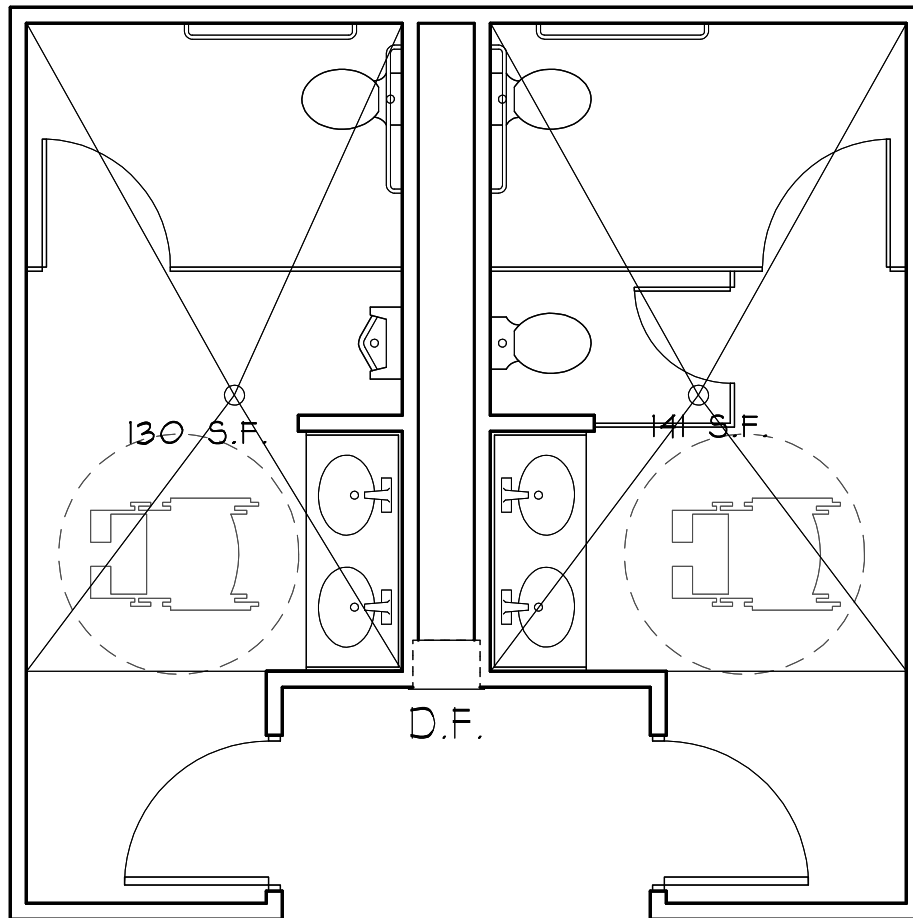
DAY ROOM

PLOT DATE: 3/20/2008

SCALE: 3/16" = 1'-0"

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ROOM #29



MITCHELL ASSOC. ARCHITECTS

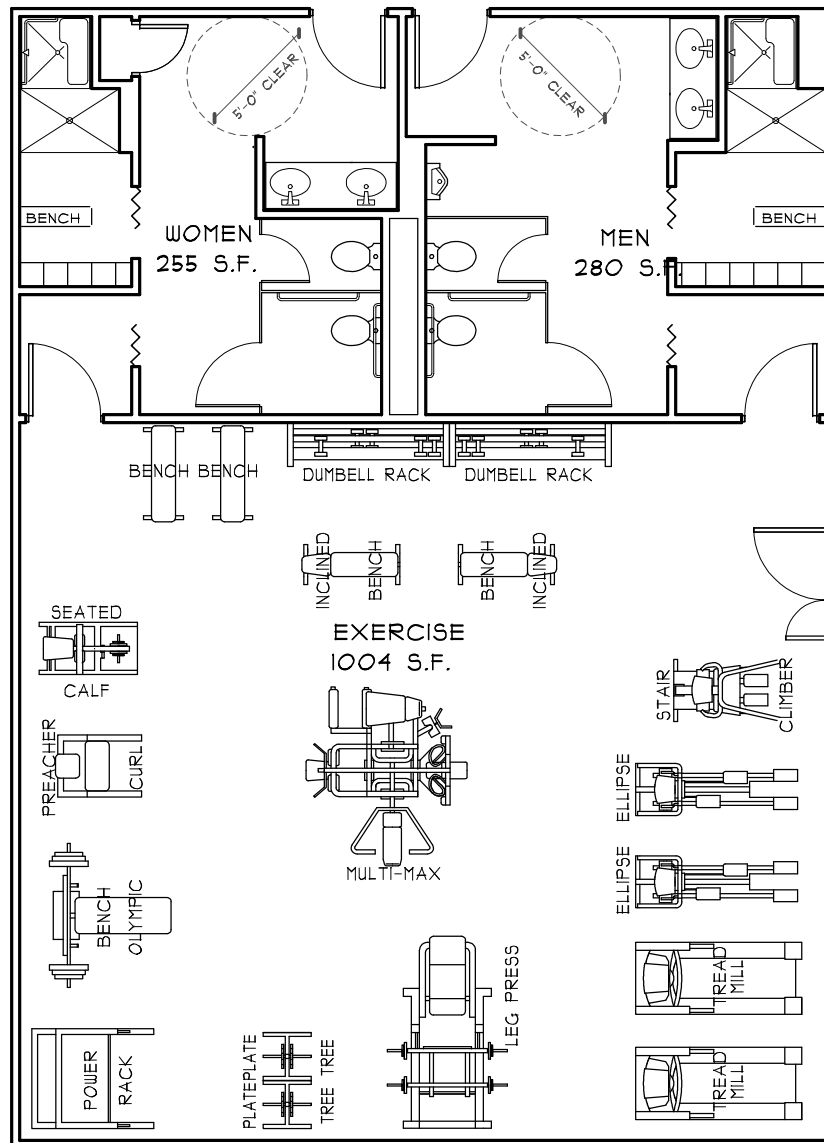
BATHROOMS

PLOT DATE: 3/20/2008

SCALE: 1/4" = 1'-0"

C:\Data\Drive\Peekskill\Individual Rooms\29 - Firefighter's Bathrooms

ROOMS # 30 & 31



MITCHELL ASSOC. ARCHITECTS

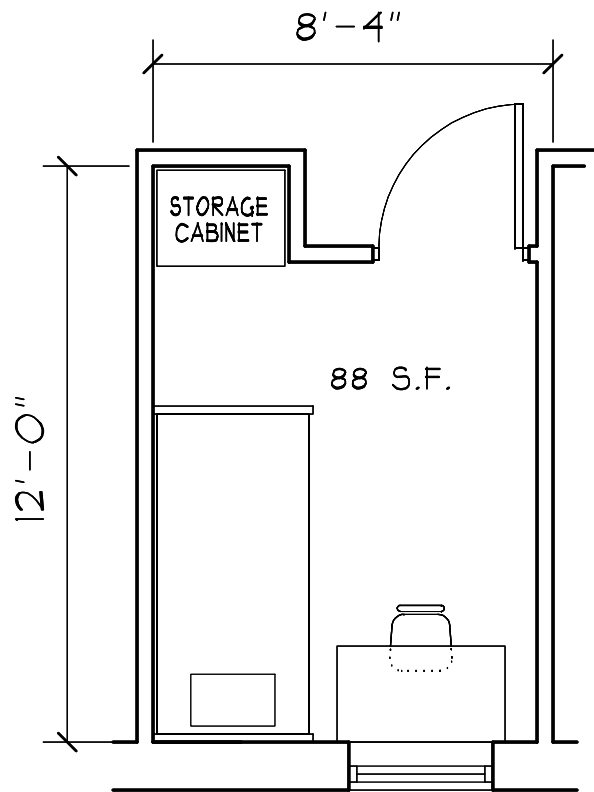
1,000 SQ FT GYM W/ BATH

PLOT DATE: 3/18/2008

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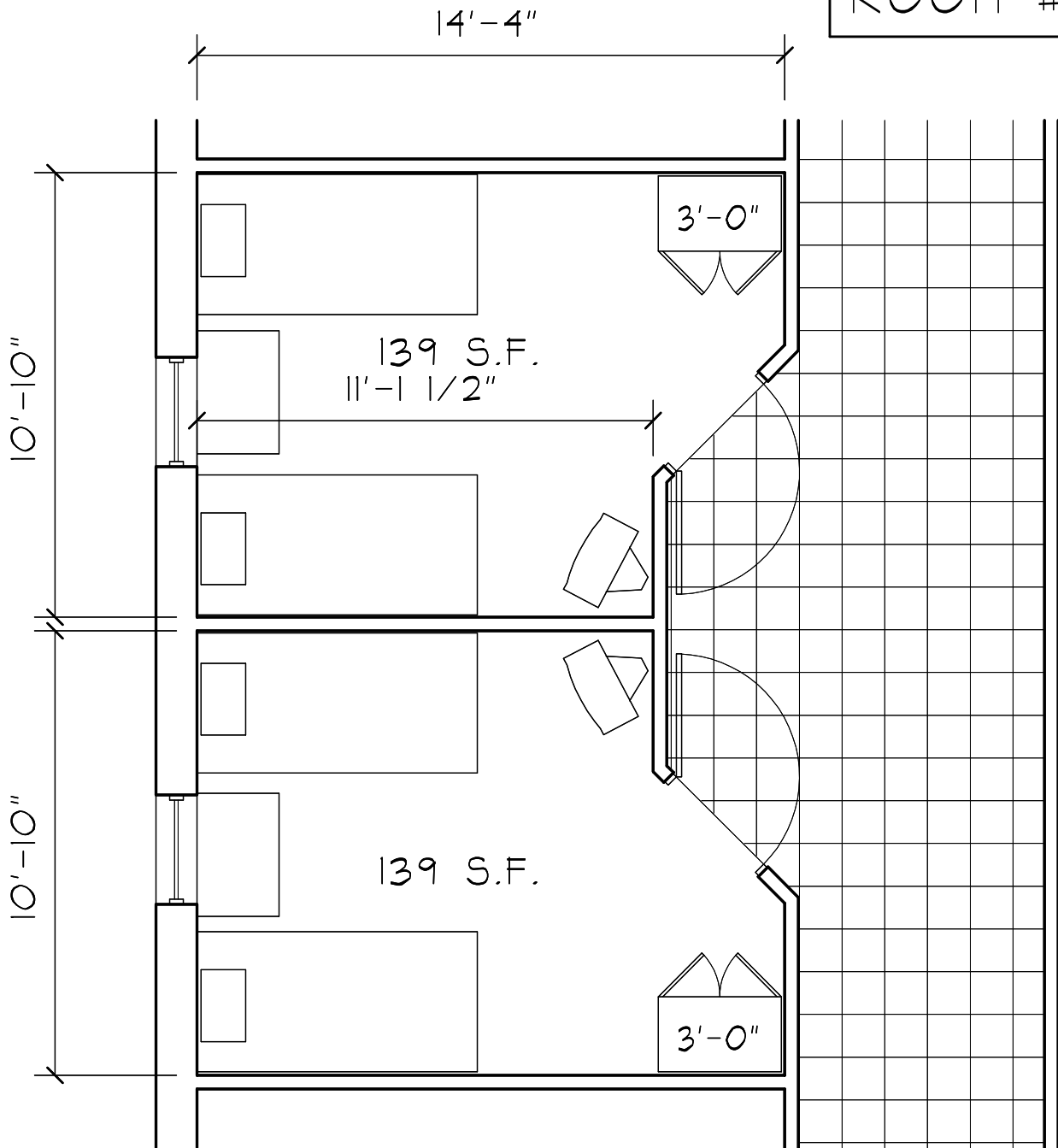
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ROOM #32



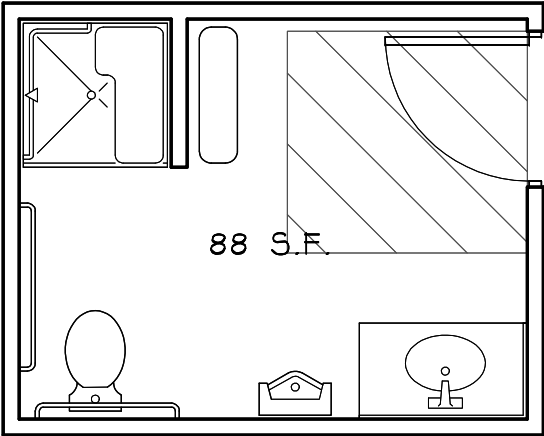
MITCHELL ASSOC. ARCHITECTS
1 PERSON BUNK ROOM
PLOT DATE: 3/18/2008
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ROOM #33

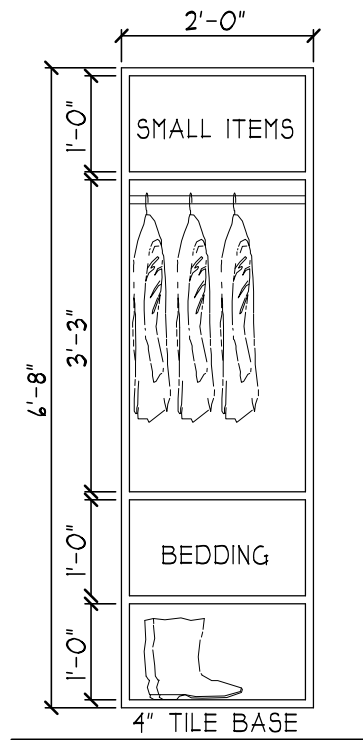


MITCHELL ASSOC. ARCHITECTS
BUNK ROOM
PLOT DATE: 3/18/2008
SCALE: 1/4" = 1'-0"
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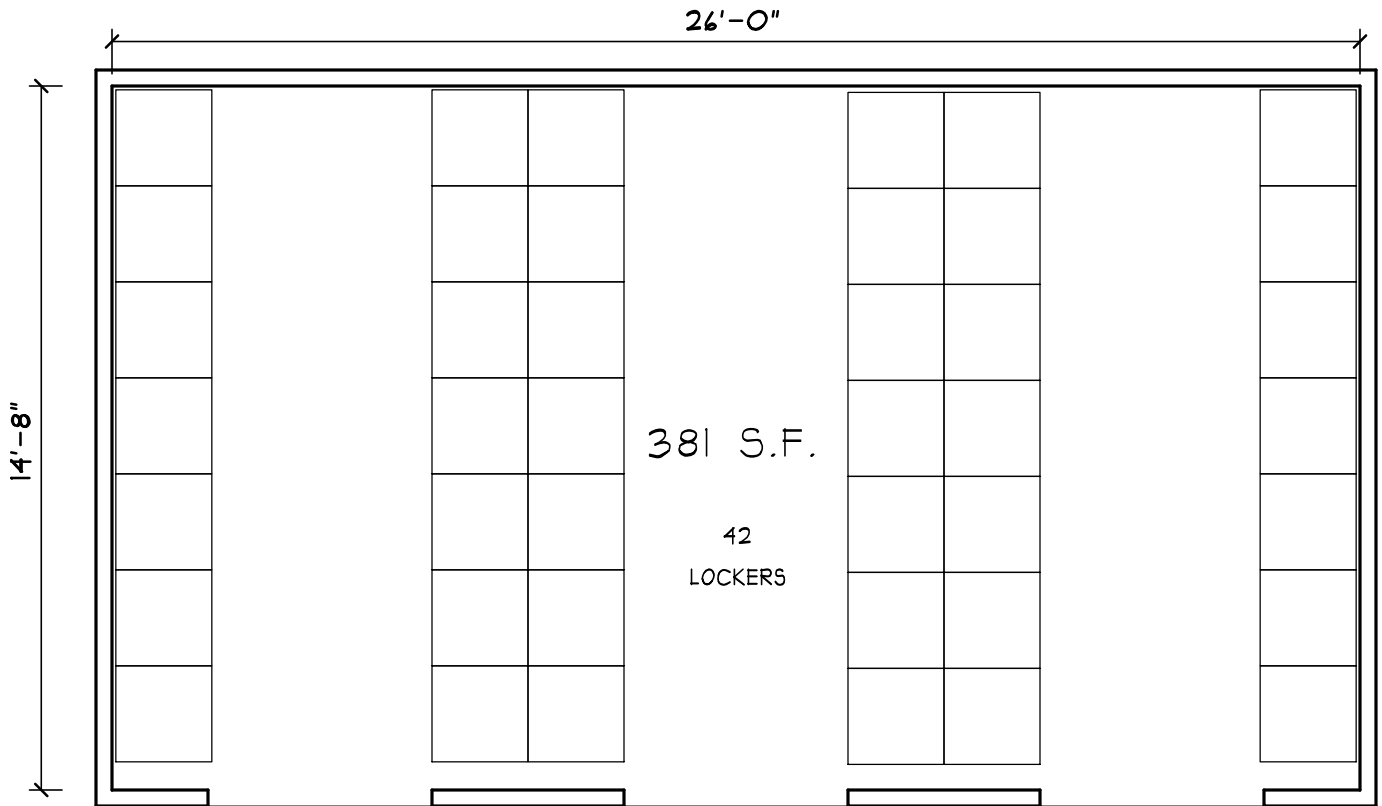
ROOM #34



MITCHELL ASSOC. ARCHITECTS
BUNKERS BATHROOM
PLOT DATE: 3/19/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\34 - Bunkers Bathroom

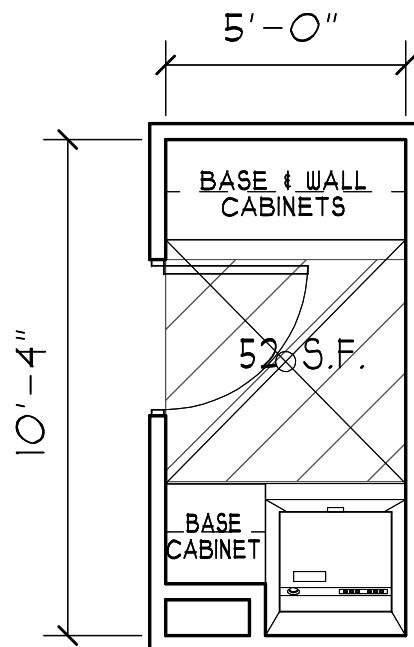


ROOM #35



MITCHELL ASSOC. ARCHITECTS
CARREER PERSONNEL LOCKERS
PLOT DATE: 3/19/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peetaskil\Individual Rooms\35 - Bunkers Personal Lockers

ROOM #36



MITCHELL ASSOC. ARCHITECTS

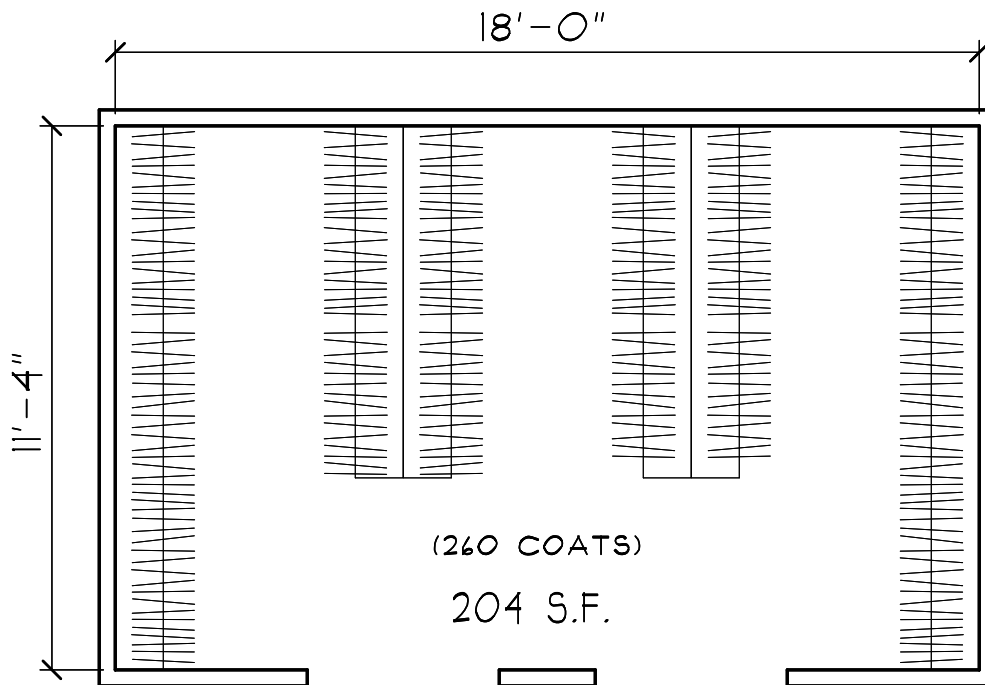
LAUNDRY

PLOT DATE: 3/19/2008

SCALE: 1/4" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\36 - Career Laundry

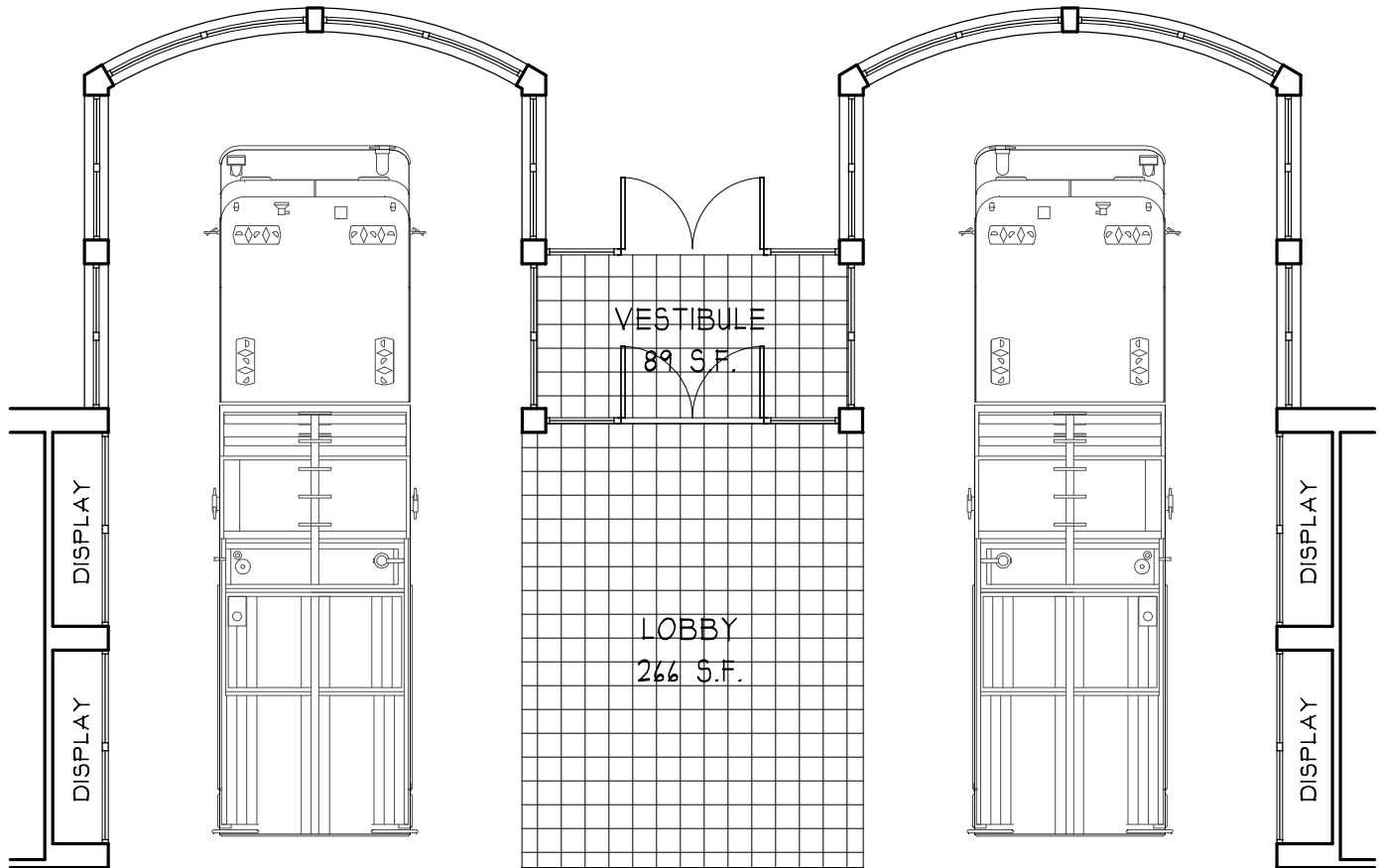
ROOM #38



MITCHELL ASSOC. ARCHITECTS
COAT ROOM
PLOT DATE: 3/19/2008
SCALE: 1/4" = 1'-0"
C:\Data\W Drive\Peekskill\Individual Rooms\38 - Coats

ROOM #39

DEPICTION OF VEHICLES
WILL BE REVISED WHEN WE
HAVE FINAL INFORMATION
REGARDING THE ANTIQUES

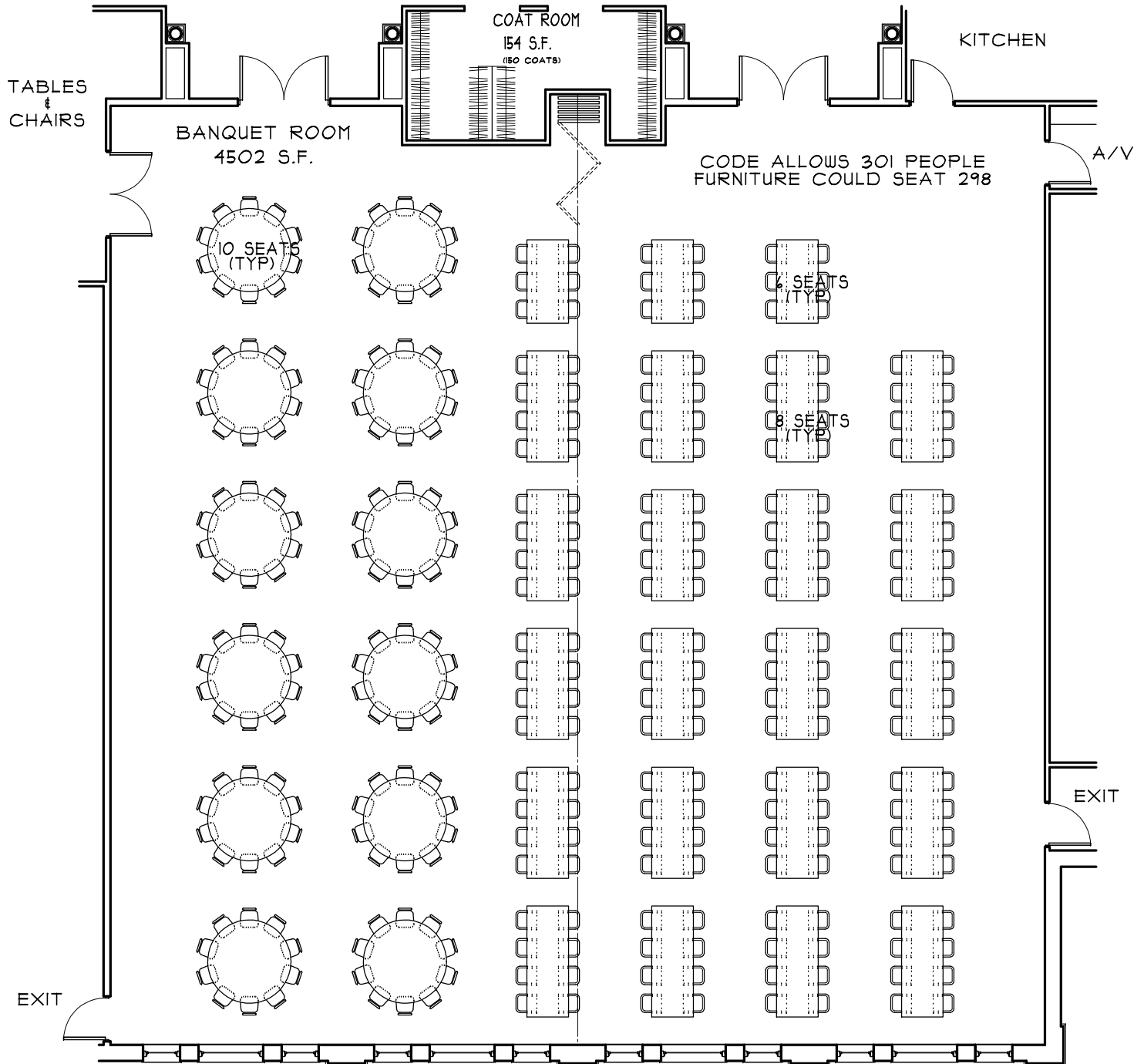


MUSEUM
1578 S.F.



MITCHELL ASSOC. ARCHITECTS
MUSEUM
PLOT DATE: 3/20/2008
SCALE: 1/8" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\39 - Museum

ROOM #40a



MITCHELL ASSOC. ARCHITECTS

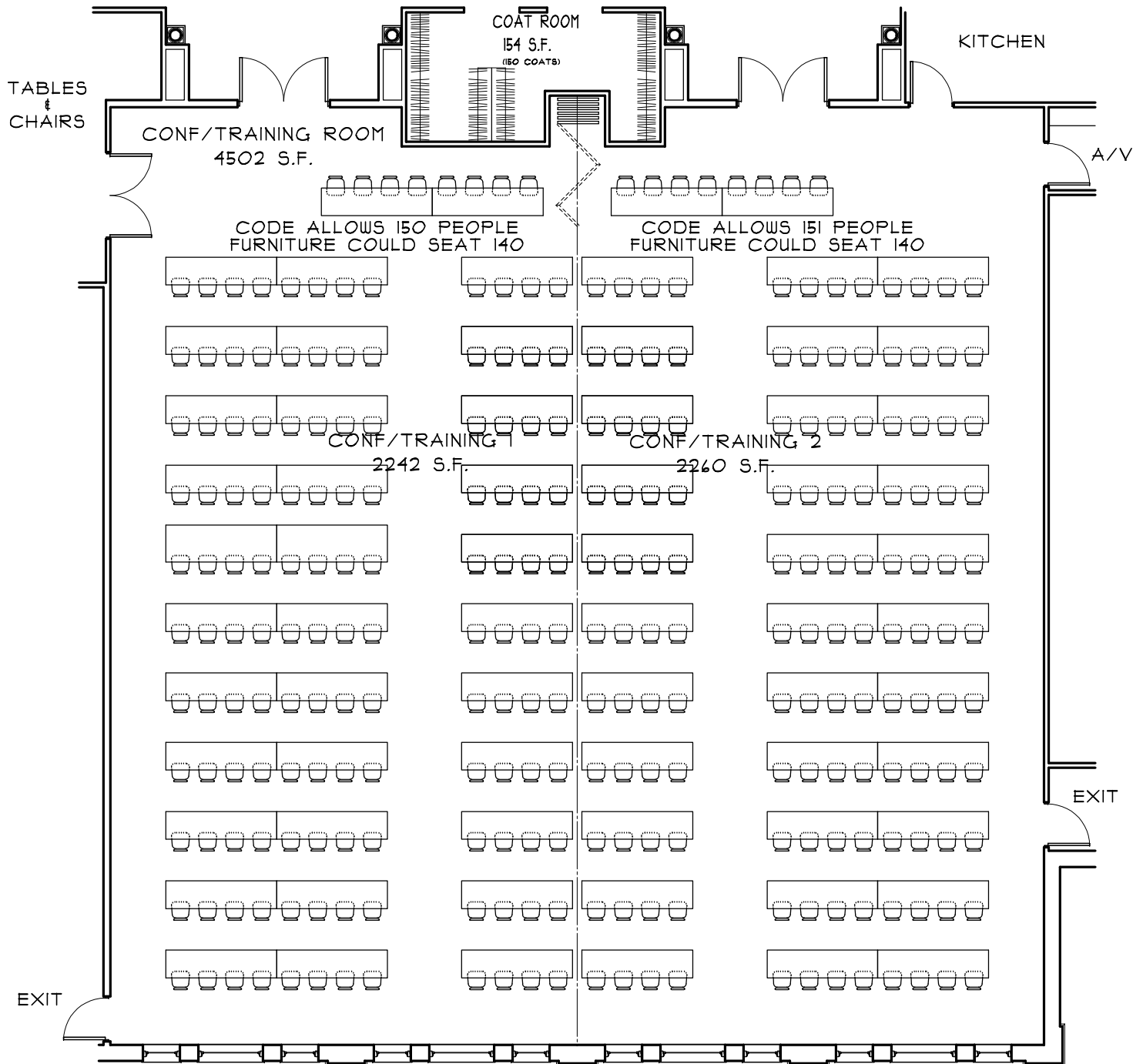
MEETING/TRAINING ROOM

PLOT DATE: 3/20/2008

SCALE: 3/32" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\40 - Meeting-Training

ROOM #40b



MITCHELL ASSOC. ARCHITECTS

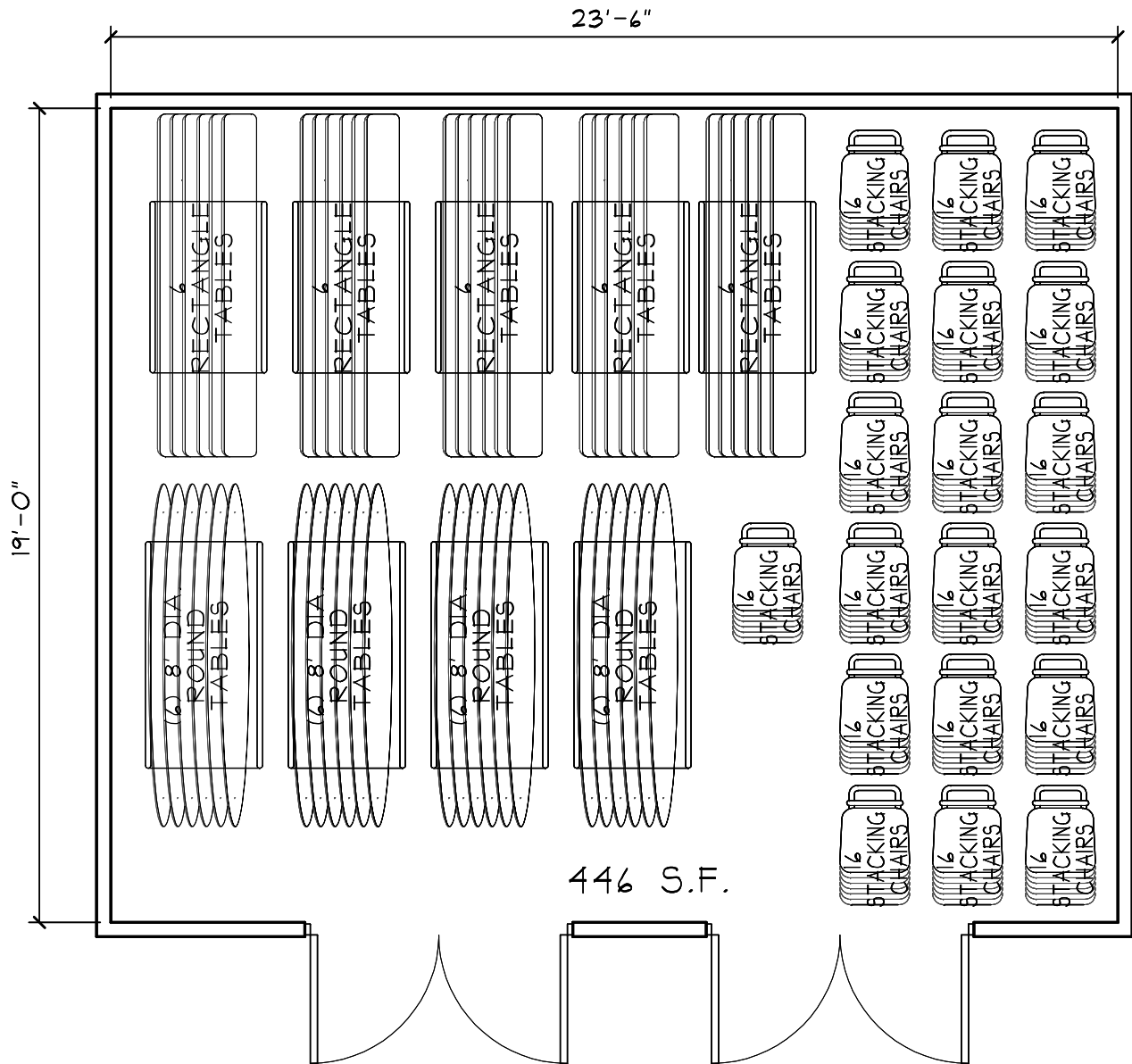
MEETING/TRAINING ROOM

PLOT DATE: 3/20/2008

SCALE: 3/32" = 1'-0"

C:\Data\J Drive\Peekskill\Individual Rooms\40 - Meeting-Training

ROOM #41



SEATING FOR 300 (EITHER AT ROUNDS OR RECTANGLES)
 300 CHAIRS (19 STACKS)
 24 ROUND TABLES (4 RACKS)
 30 RECTANGULAR TABLES (5 RACKS)

MITCHELL ASSOC. ARCHITECTS

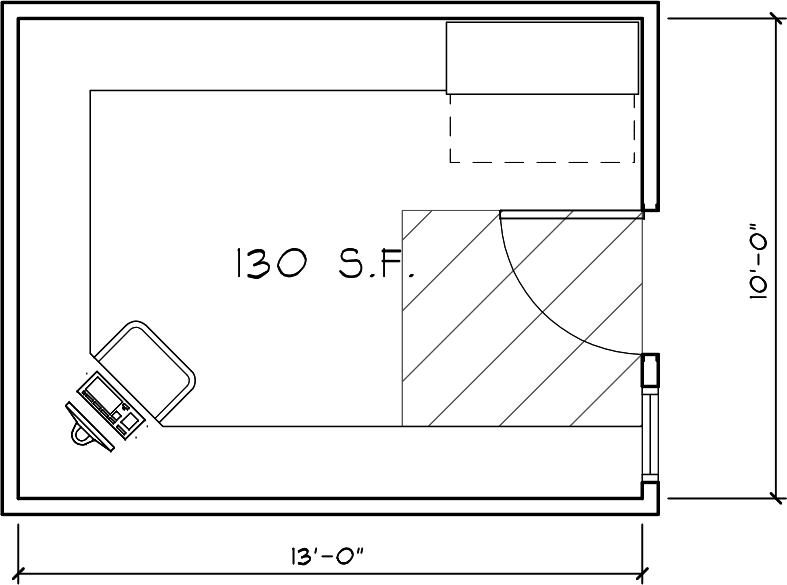
TABLE & CHAIR STORAGE

PLOT DATE: 3/19/2008

SCALE: 1/4" = 1'-0"

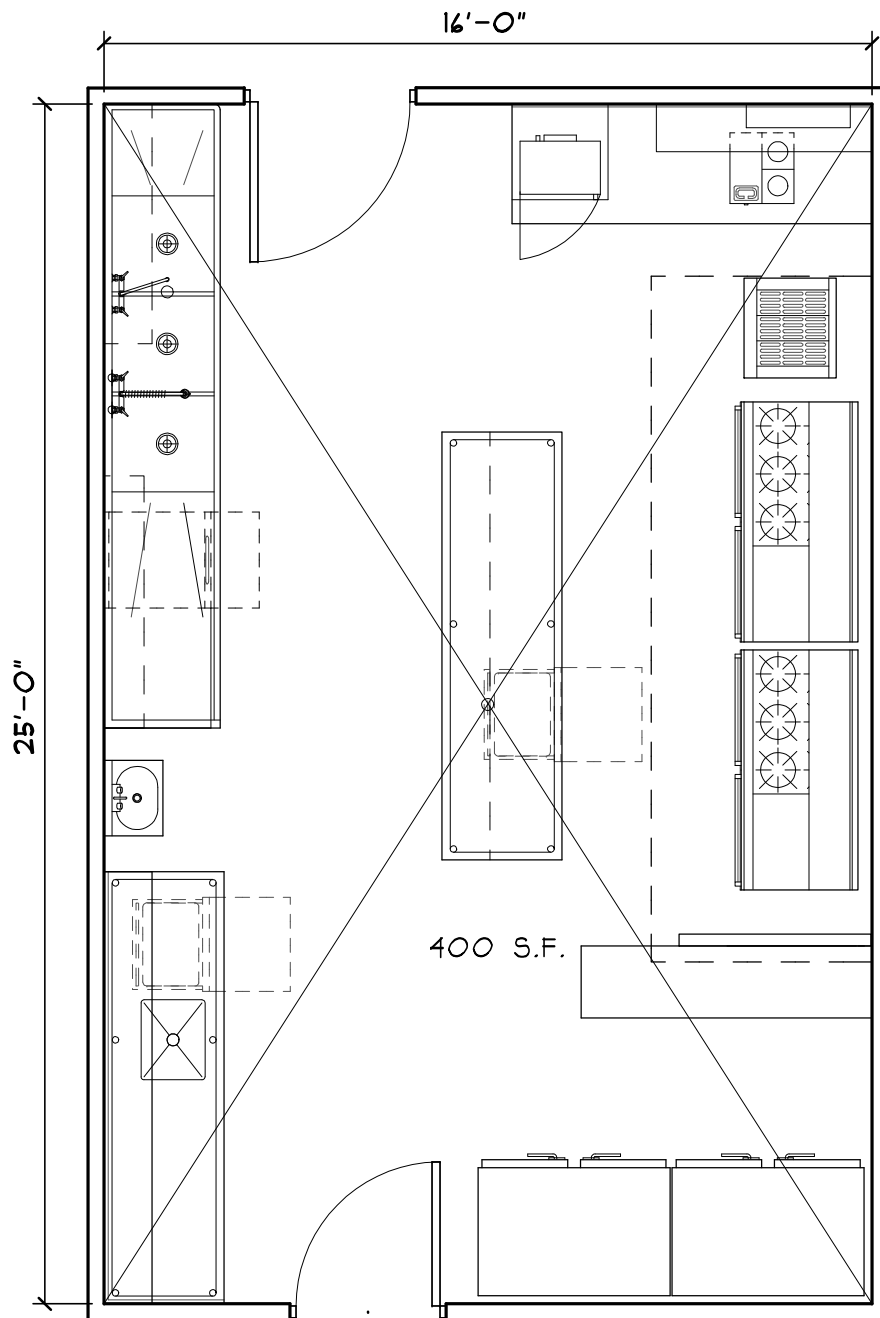
C:\Data\J Drive\Peekskill\Individual Rooms\41 - Tables & Chairs

ROOM #42



MITCHELL ASSOC. ARCHITECTS
A/V
PLOT DATE: 3/19/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\42 - A-V

ROOM #43



MITCHELL ASSOC. ARCHITECTS

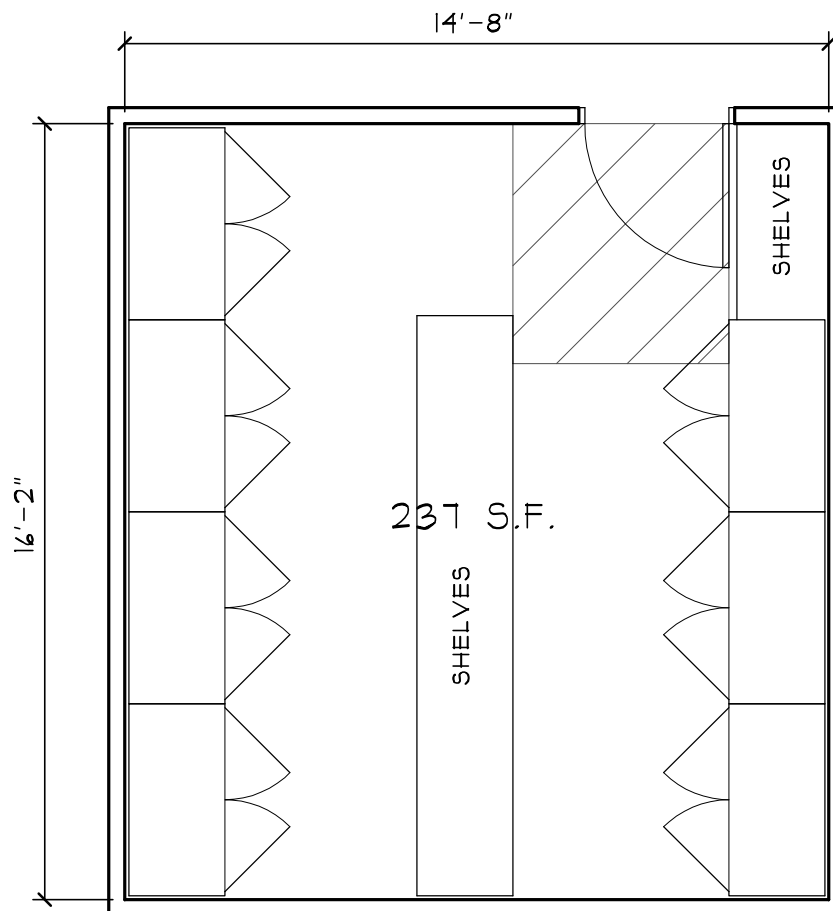
KITCHEN

PLOT DATE: 3/19/2008

SCALE: 1/4" = 1'-0"

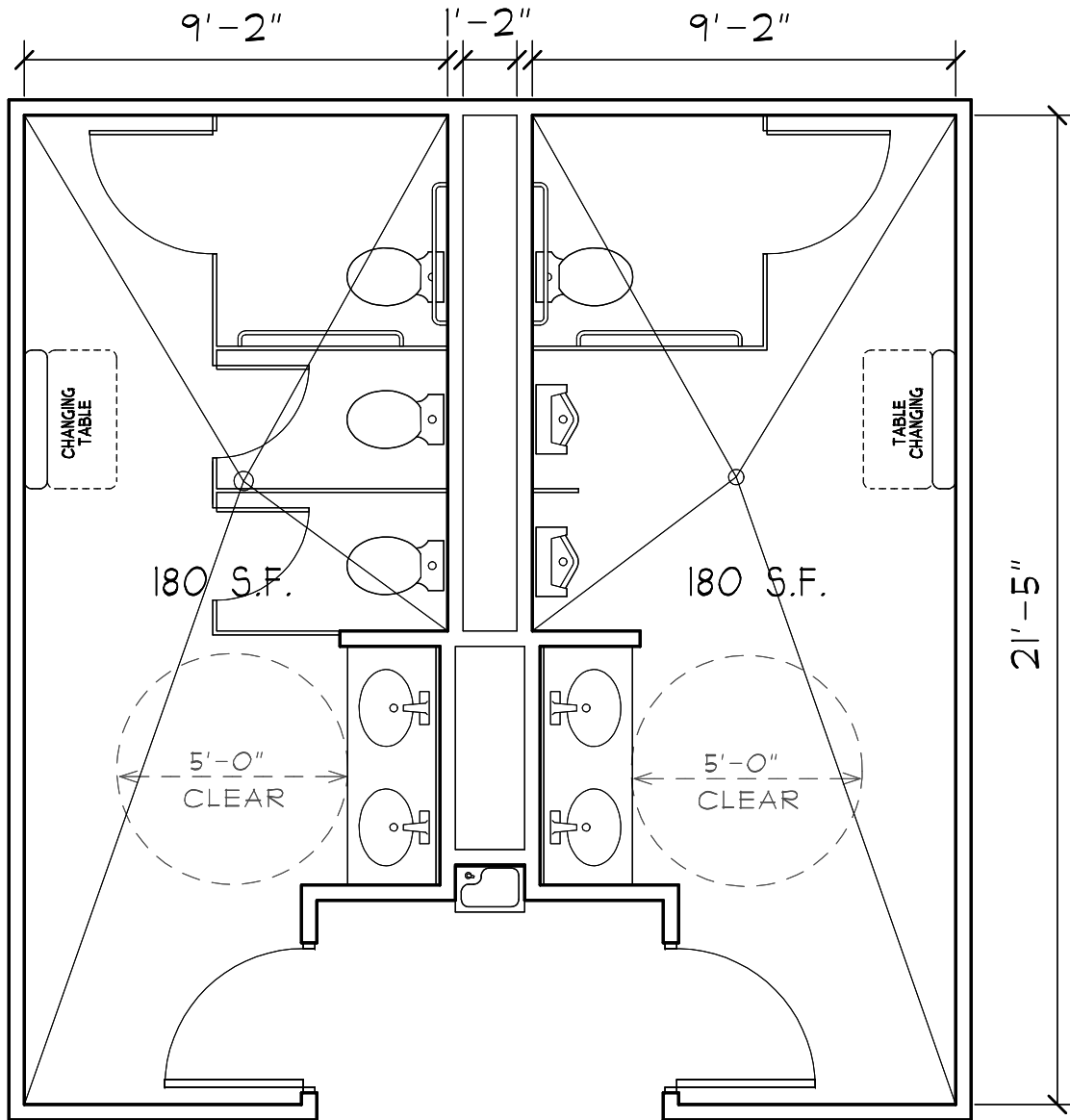
C:\Data\J Drive\Peekskill\Individual Rooms\43 - Kitchen

ROOM #44



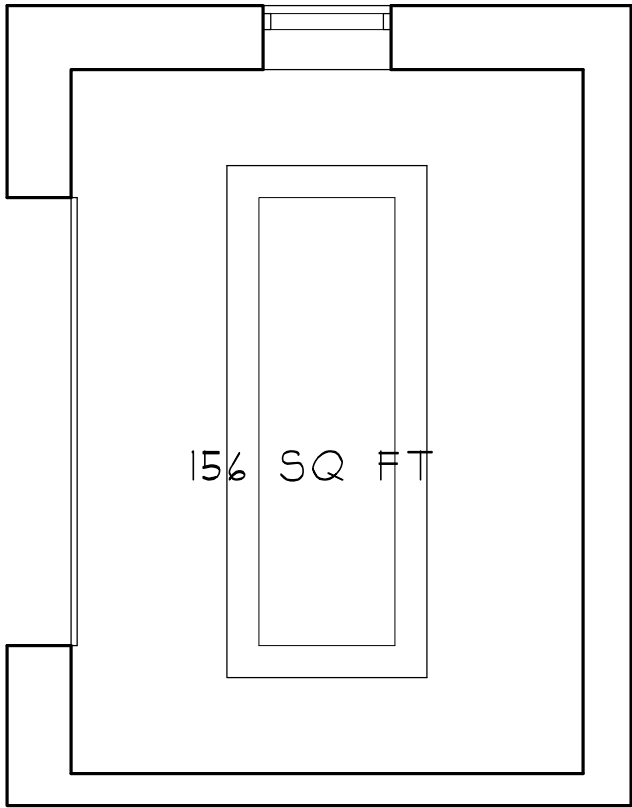
MITCHELL ASSOC. ARCHITECTS
PANTRY
PLOT DATE: 3/19/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\44 - Pantry

ROOM #45



MITCHELL ASSOC. ARCHITECTS
BATHROOMS
PLOT DATE: 3/19/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\45 - Public Restrooms

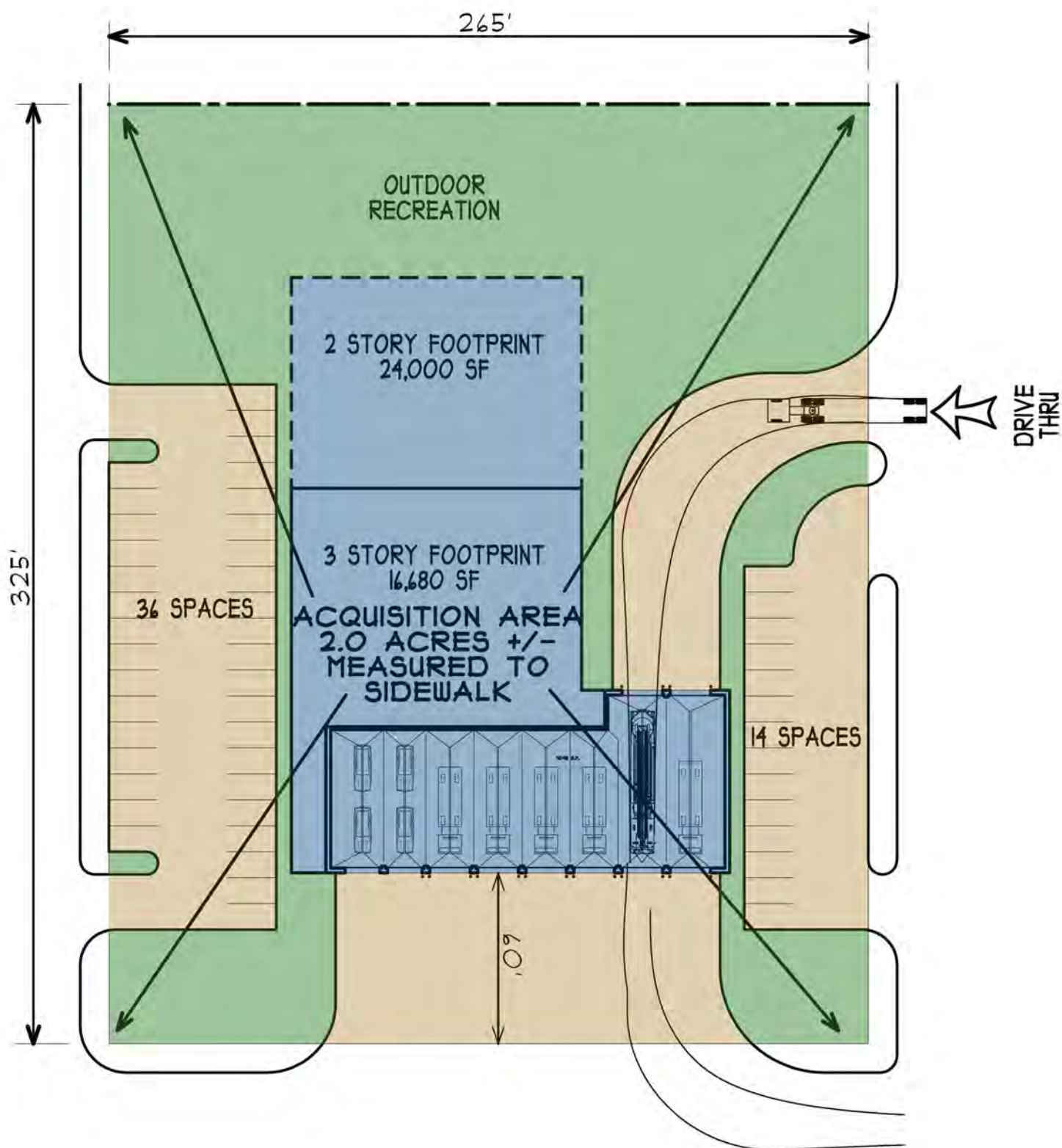
ROOM #49



MITCHELL ASSOC. ARCHITECTS
GENERATOR
PLOT DATE: 3/19/2008
SCALE: 1/4" = 1'-0"
C:\Data\J Drive\Peekskill\Individual Rooms\49 - Generator

Appendix C

Diagrammatic Prototype Site Plan



Diagrammatic Prototype
Site Plan n.t.s

Appendix D

Manitou Report

PEEKSKILL FIRE STATION ANALYSIS MEMORANDUM

Recommendations

Based on the analysis undertaken for this project, we recommend that the best location for a consolidated facility would be adjacent to the intersection of Park and Broad Streets. Our techniques do not allow a further refinement of the location, and for response time purposes, either of the four sites bordering this intersection are equally acceptable. The site at Park Street and James Street does not allow direct access to an arterial street. The site on Washington Street would result in a degradation of response times, particularly if all units are moved to this location.

Recommendations among the four sites must be made on architectural, site acquisition, and environmental considerations. These considerations are not a part of this analysis. The orientation of these sites with respect to Park or Broad Streets assumes that a traffic control device will be installed to permit apparatus to depart the fire station without delay. Consideration should be given to installation of traffic light pre-emption for intersections at Main and Broad Streets and Crompond Road and Broad Streets at a minimum.

We analyzed an option to consolidate all facilities into one location, and also evaluated retention of the Washington Street station along with new facility consolidating remaining apparatus and equipment at Broad and Park Streets. Although a one-station option would be acceptable, the two-station option maintains response times in the extreme southern portion of the City.

Background: The City and Fire Department

The City's protection boundaries are coterminous with the City limits, with the exception of a small area of protected under contract with the Dogwood Road Fire Protection District. This contract is expiring and subject to renewal in the near future.¹ Any change in the contract would not have a bearing on the issue of station locations. A total land area of approximately 4.3 square miles is protected.

Peekskill's population is growing. In the 2000 Census, the City had 22,441 residents. Estimates for 2006 show the population at 24,601. A combination of new housing developments and higher occupancy in existing buildings is causing an increase in population. Although the City is primarily residential in character, it has a mix of industry, commercial, institutional uses and a "downtown" section. Being along the Hudson River, the waterfront and recreational boating cause some demands for fire service. A predominance of 100 year-old Victorian and wood frame structures pose a challenge for the Department. Many of these structures have been converted to multifamily use, adding to the density of population, and posing challenges in the event of fire. A few high-rise buildings are also present in the City. These are residential, and are not equipped with sprinklers.

The Peekskill Fire Department (PFD) is a combination fire department, primarily relying on volunteers, but with paid apparatus operators (driver/operators). All officers are volunteers, with a Chief being elected by the membership. As a municipal entity, the City Council fulfills the role of a Board of Fire Commissioners, setting and approving the budget, and providing oversight. Like many older cities in

¹ The area under contract is Dogwood Road, from Highland Avenue to near Radio Terrace.

the area, the Department was founded on the Company system, with each company being formed by a grassroots effort of neighbors in a particular part of the City. The oldest company is in excess of 130 years old. The Department is composed of companies, who until recently, operated semi-independently in administrative matters. New members now join the “Peekskill Fire Department”, rather than a particular company. The companies continue to exist in various states of vigor, but now play no operational role. They will continue to serve as social entities and a source of affiliation for members of the Department.

The PFD operating strategy is for units assigned to an alarm to leave immediately with a crew of one person, and for volunteers to respond directly to the scene in their personal or departmental vehicles. In most cases, volunteers are reported to arrive approximately the same time as the fire apparatus. Only paid personnel drive and operate major fire apparatus. In the event of multiple incidents or a major event, a career staff member is recalled to place any remaining apparatus into service. Volunteer personnel provide the staffing to do everything else, including incident scene management. The Chief reports that a fire call involving a building will result in a turnout of 20-30 volunteers.

Paid staff are deployed with one person per apparatus. Contractually, a minimum of five staff must be working 24 hours a day. This means that when the City operates at minimum staffing (which is frequent), only five of the city’s six companies are actually staffed and able to respond.² This career crew also staffs two emergency medical services (EMS) advanced life support vehicles. These vehicles, known as “fly cars”, provide advanced life support services to the City of Peekskill and Town of Cortlandt. These two EMS vehicles are cross-staffed with fire companies, meaning that when they respond, that their fire company goes out of service until they return from their call. A cadre of the PFD paid staff are certified as paramedics, and they are assigned to the companies housed with the fly cars.

The fly cars are not equipped to transport patients, and rely on a response from one of the volunteer ambulance corps to take the patient from the scene to the hospital. On transports where advanced life support skills are needed, the firefighter/paramedic will go to the hospital with the patient. These types of calls for service can result in relatively long “out-of-service” times.

Table 1: Peekskill Fire Department Station and Unit Information

Station Number	Location	Apparatus	Description
1	800 Block Main Street	TL-45	Cortlandt Hook and Ladder
3	Broad St. and Crompond Rd.	E133	Washington Engine
4	Dayton Lane	E132	Columbian Hose
5	Broad St. and Crompond Rd.	E131, 32 Medic 1	Columbian Engine
6	701 Washington St	E130, 32 Medic 2	Centennial Hose

The PFD fleet consists of four engine companies, a rescue company, and one ladder company. The configuration of companies and their locations are given in Table 1.

The City’s four engines, rescue, and ladder company are dispatched to incidents as shown in Table 2. There are no pre-determined extra alarm assignments. The officer in charge at the scene calls for

² The Columbian Hose Company on Dayton Lane is the first company to close.

apparatus as needed, using the City's resources first, and then calling for mutual aid from surrounding departments.

Table 2: Apparatus Assignments

Type of Alarm	Engines	Ladder	Rescue
Structural Fire	2	1	1
Automatic Fire Alarm	1	1	1
Carbon monoxide alarm		1	1
Outside fire	1		
Vehicle fire on highway	2		

The PFD responds to approximately 800 incidents per year. These include fires, automatic alarms, auto accidents, outside fire, water problems, hazardous conditions such as gas leak, and related incidents. They also respond as firefighters to EMS assists in cases where the Peekskill Volunteer Ambulance Corps has only one member responding, or no ambulance available. This EMS role is separate and distinct from the advanced life support (ALS) service delivered Town-wide through the fly car system. These two units respond to approximately 2000 calls for service per year, including responses into the Town of Cortlandt.³

The Project

Manitou, Inc. was retained by Mitchell Associates Architects (MA) of Voorheesville, New York to provide facility location services in connection with design of a new fire station for the City of Peekskill. This new facility was intended to consolidate operations, currently spread around five different facilities housing six fire companies.

The City, through Mitchell Architects, provided a list of seven sites for consideration:

1. The current fire station site (Washington Engine and Columbian Engine) at Broad Street and Crompond Road
2. 701 Washington Street, current site of Centennial Hose Company
- 3-6. The four corners of the intersection of Park and Broad Streets
7. Corner of Howard Street and Park Street (location of municipal parking garage)

Manitou was tasked with evaluating these sites for a potential consolidated fire station. The basic objective of any fire station location exercise is to locate the facility so that it minimizes either a) the travel time to actual incidents; or b) minimizes the travel time to all portions of the service area. This question is largely a values question, but in a small area such as Peekskill, the difference between these two answers is minimal.

Moving from a five-station configuration to a one station configuration in an area less than five square miles will result in a small increase in response time to some incidents. The question is – “Is that difference meaningful?”

³ We had access to a sample of fire incidents from the PFD records system, but did not have the ability to review EMS incidents. This did not have a material effect on our recommendations.

Three stations are concentrated in the City's center, with one being located in the southern end of the City, and the other in the City's far northeast. Of the existing facilities, the Columbian Hose company, located off Dayton Lane at the rear of the Beach Shopping Center, is located very close to the City's boundaries, which limits its efficiency. Several of the stations are very close to each other, effectively covering the same area.

Figure 2 shows estimated driving time from each of the fire stations housing engine companies. The current locations allow almost the entire City to be within three minutes driving time of an engine company, assuming that all companies are in service.

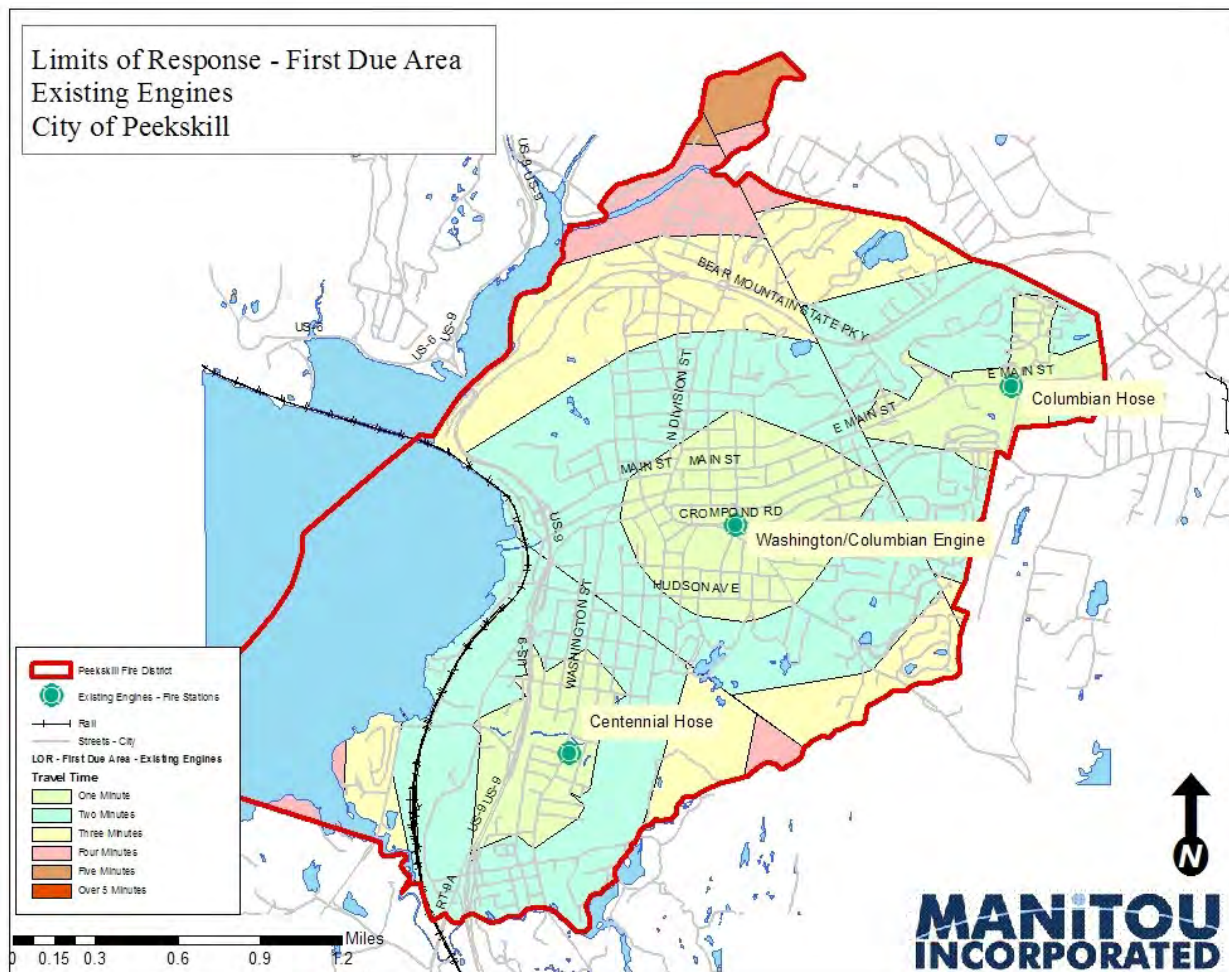


Figure 2: PFD Existing Engine Coverage

When evaluating station locations, it is important to remember that in a volunteer fire department, we must be concerned with not only the apparatus, but the members' ability to arrive on the scene of a reported emergency. Because members respond from home or work directly to the scene of emergencies, this important component of response will not change.

Ladder company service is currently provided from a station at 828 Main Street. The coverage from this facility is good, although it is not located in the center of the City. Figure 3 shows that it can cover most of the City within 4 minutes. Insurance Services Office recommendations call for ladder companies to be within 2.5 miles of built-up areas, which is met from its current location.

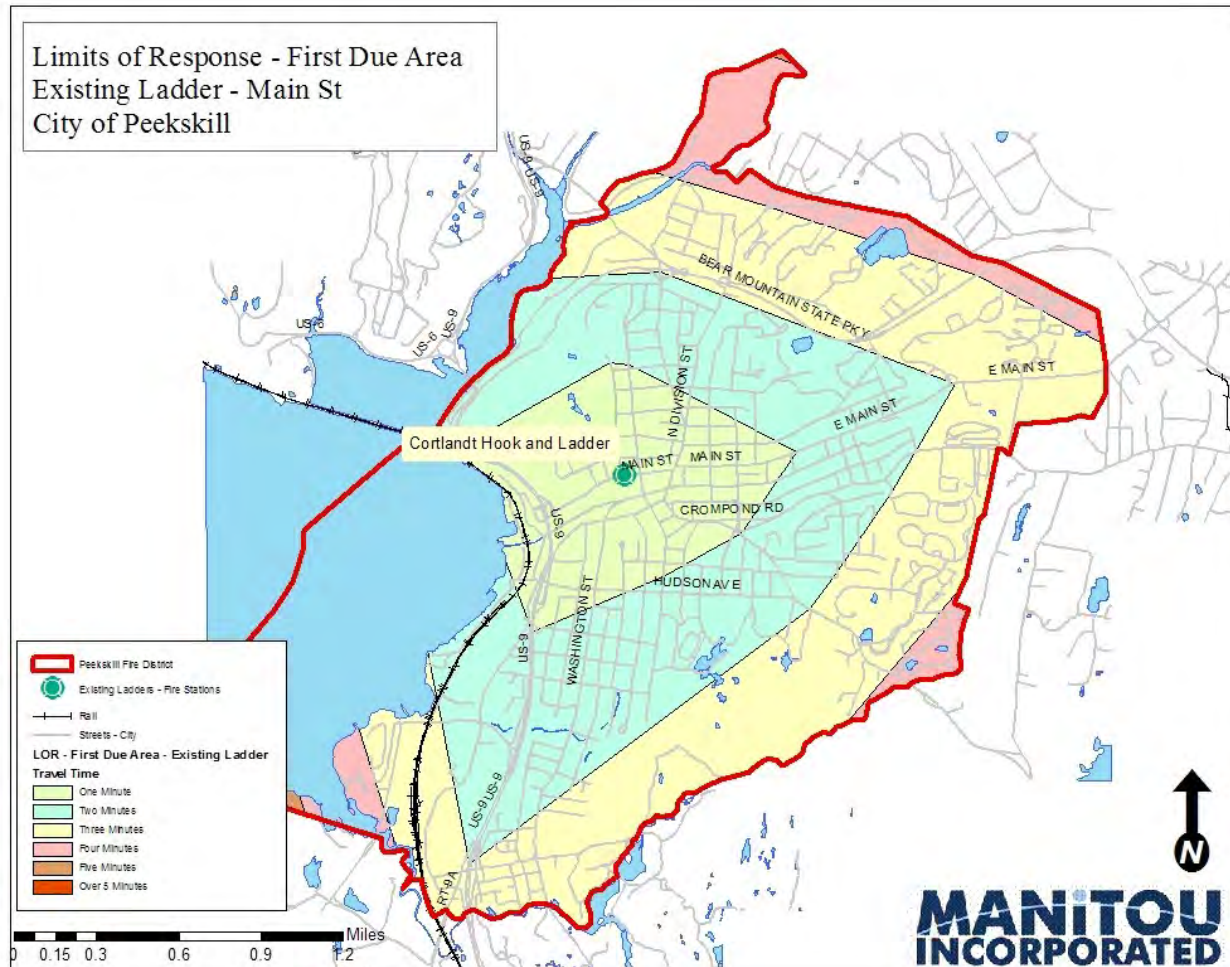


Figure 3: PFD Existing Ladder Coverage

Calls for Service

Calls for service are evaluated by looking at their location relative to the fire stations. A review of fire, EMS (with fire response), and “other” calls for service shows that these incidents are distributed throughout the City, but concentrated in the more dense downtown section. This affirms the philosophy of putting more resources in the City’s downtown for reasons of proximity to incidents, and for being centrally located for purposes of emergency response throughout the City.

Station Location Analysis

In evaluating the sites to be considered, they can be broken down to two general areas: the intersection

of Broad and Park Streets, and 701 Washington Street. Sites within a few blocks of these sites (the existing fire station at Broad Street and Crompond Road, and the parking garage at Park and Howard Streets) do not need to be examined separately for response time purposes. The difference in time over a few block is negligible, and site characteristics are predominant in analysis of a specific plot of land.

Broad Street and Park Street Site

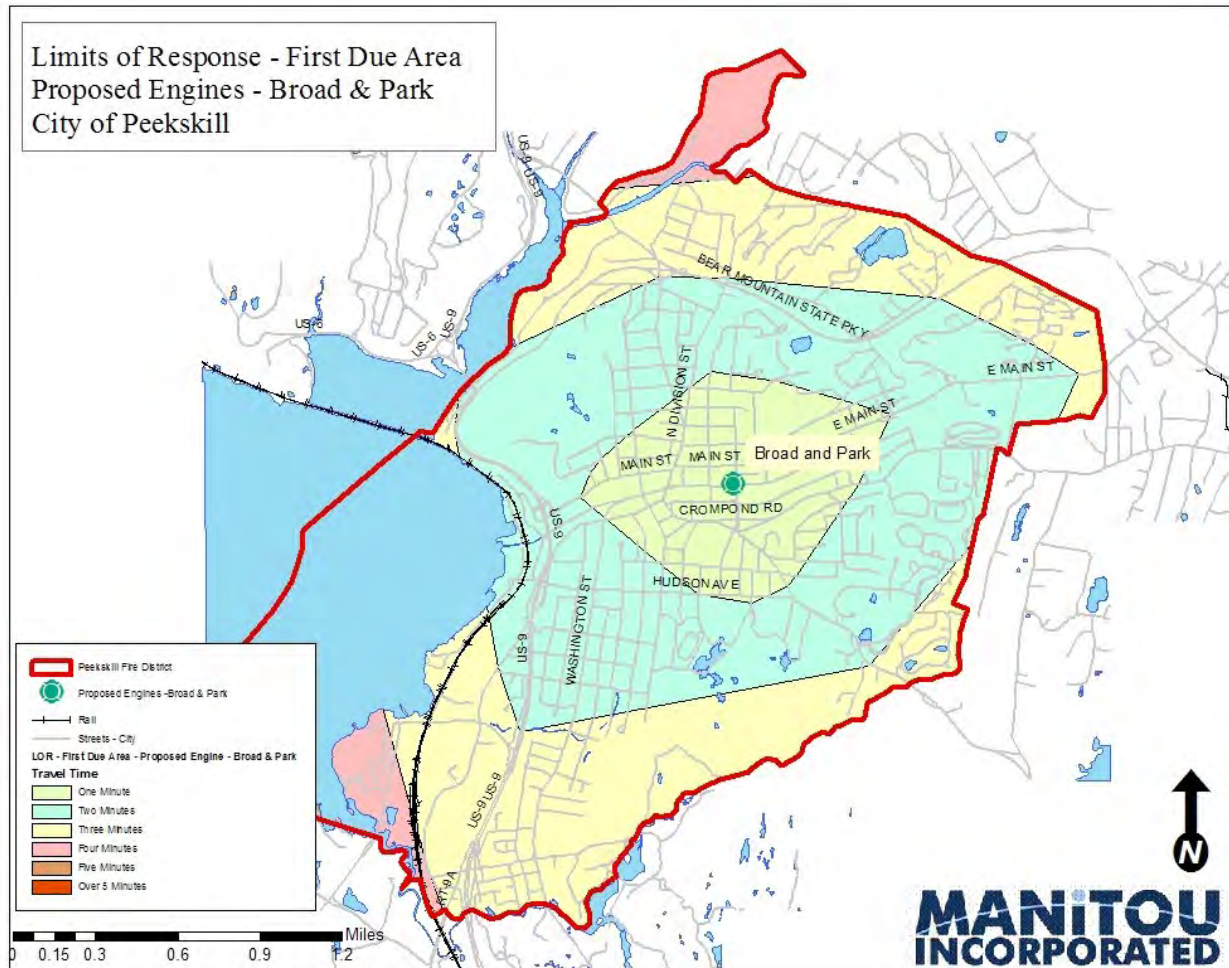


Figure 4: Proposed Site at Broad and Park Streets

Figure 4 shows the response time contours from a facility at Broad and Park Streets. As can be seen, most of the City can be served within 4 minutes driving time. While coverage is good, there is an area south of the current station on Washington Street that is beyond the 1.5 mile ISO distance recommendation. The reference to the ISO is included only for completeness. Many communities do not adhere to these guidelines, which are used as an element of property insurance rating.

The territory covered by Station 4 (Dayton Lane) can be covered adequately by the proposed new facility.

Washington Street Site

We evaluated the suitability of the Washington Street site. Because of this site's location in the southern end of the City, its response times to parts of the City are longer than desirable, and represent a marked decline in service from current conditions. In Figure 5, we can see that while downtown can be reached within 3 minutes, areas to the north and east are served in 2-3 minutes longer than under current conditions. Also, response patterns for calls in the northern part of the City would require apparatus to drive through downtown, which potentially introduces additional delays due to congestion and narrow streets.

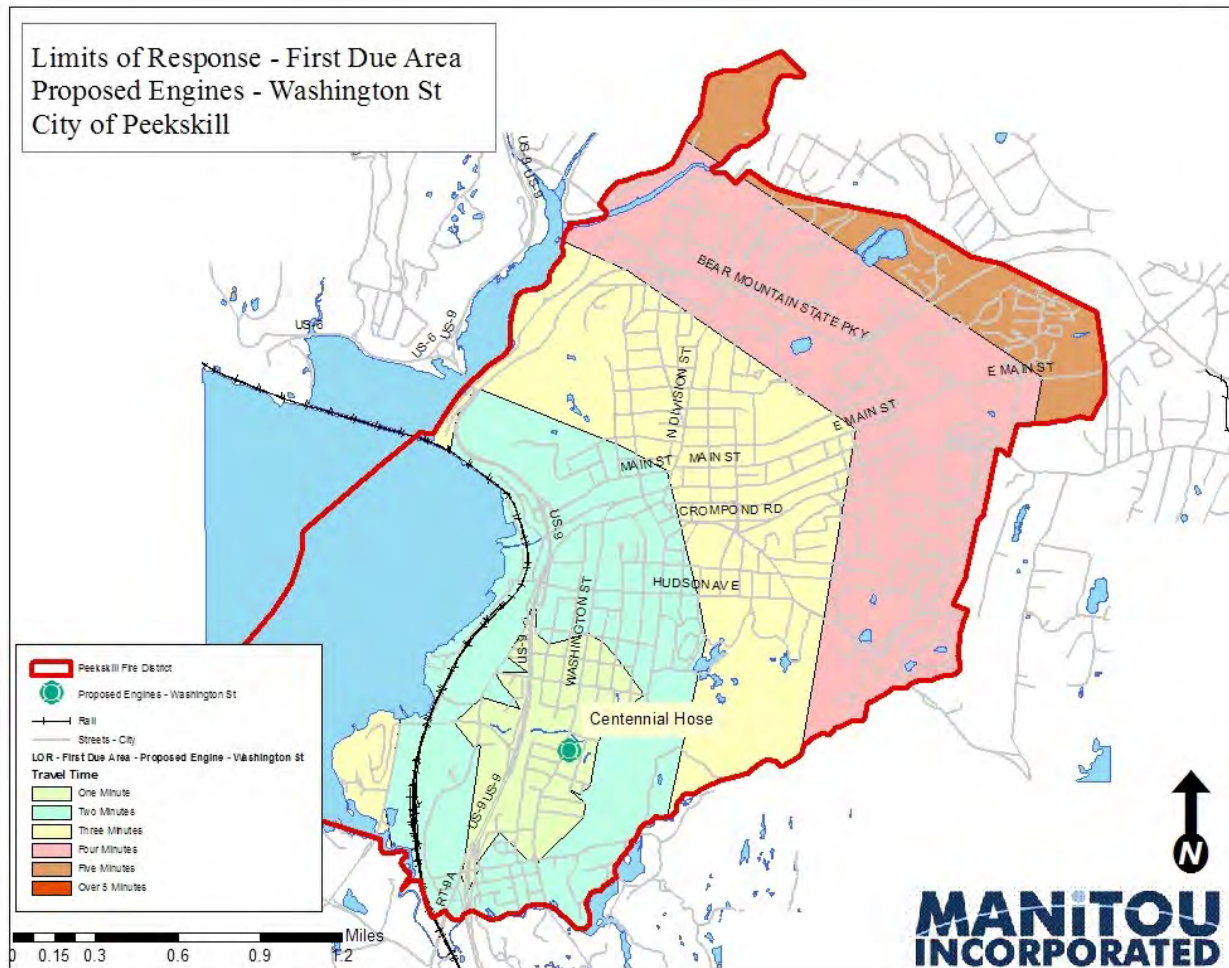


Figure 5: PFD Service Area from Washington Street Site Only.

Recommendations

Consolidated Fire Station Preferred Location -- The maps clearly indicate that the site at Broad and Park Streets is the preferred choice for a consolidated facility. The downtown location places the station near the highest concentration of calls for service, locates apparatus to be able to respond citywide from a central location, and results in the smallest degradation in response time of all the potential sites.

We recommend that the consolidated facility be located at Park and Broad Streets, or adjacent to that intersection. This location will have no impact in downtown response times, and will position the ladder company to better serve the City. This facility should be built to accommodate all the City's fire apparatus. Even with all companies operating from one centrally-located facility, most of the City will fall within the mileage requirements of the Insurance Services Organization, meaning that there should be no change in the protection classification of the City as a result of this change.

From the standpoint of providing service, the effects of this change on response times will be small, and probably not detectable on a Citywide basis.

The added benefits of being able to use staff more effectively, to balance apparatus in service with flexibility, and reduce the cost of maintaining separate facilities all support this movement.

Figure 6 shows the area of the new station with building footprints, for reference purposes. Both vacant and built-upon parcels are being considered for the site.

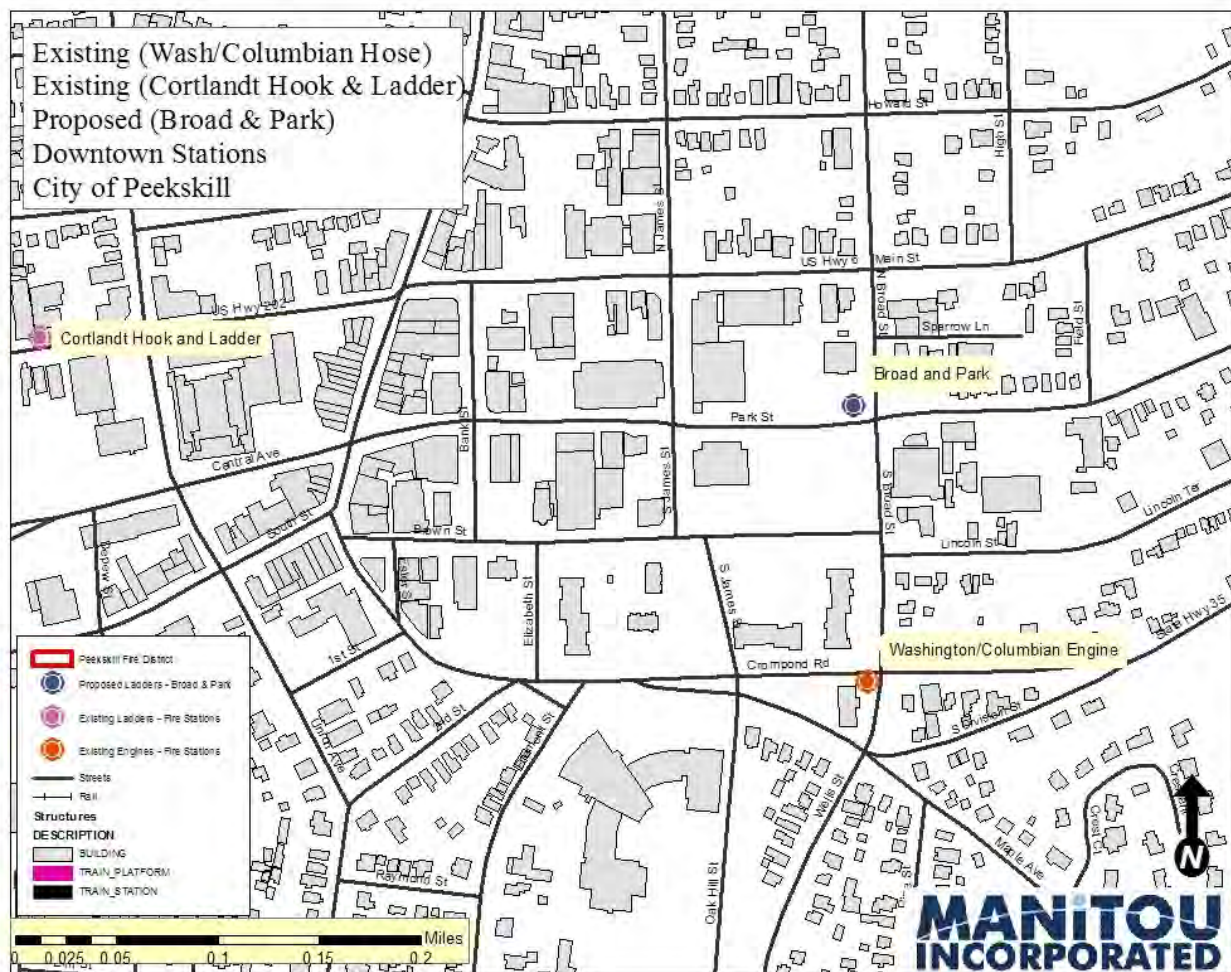


Figure 6: Building Footprints in Downtown Area Showing Current and Proposed Sites

Consolidate Facilities and Retain Washington Street Facility – If the proposed consolidated facility and Broad and Park Streets is constructed, and the Washington Street facility is retained, there is essentially

minimal degradation in engine company response time coverage, and the entire City remains within the 1.5 mile engine company response distance, meaning that there should be no risk of losing credit for engine company distribution.⁴

More importantly, no part of the City will see a significant increase in response times as a consequence of this deployment option. Figure 7 shows one-minute response time contours with a two-station configuration. Based on this analysis, we recommend that the two-station configuration be selected as the preferred alternative.

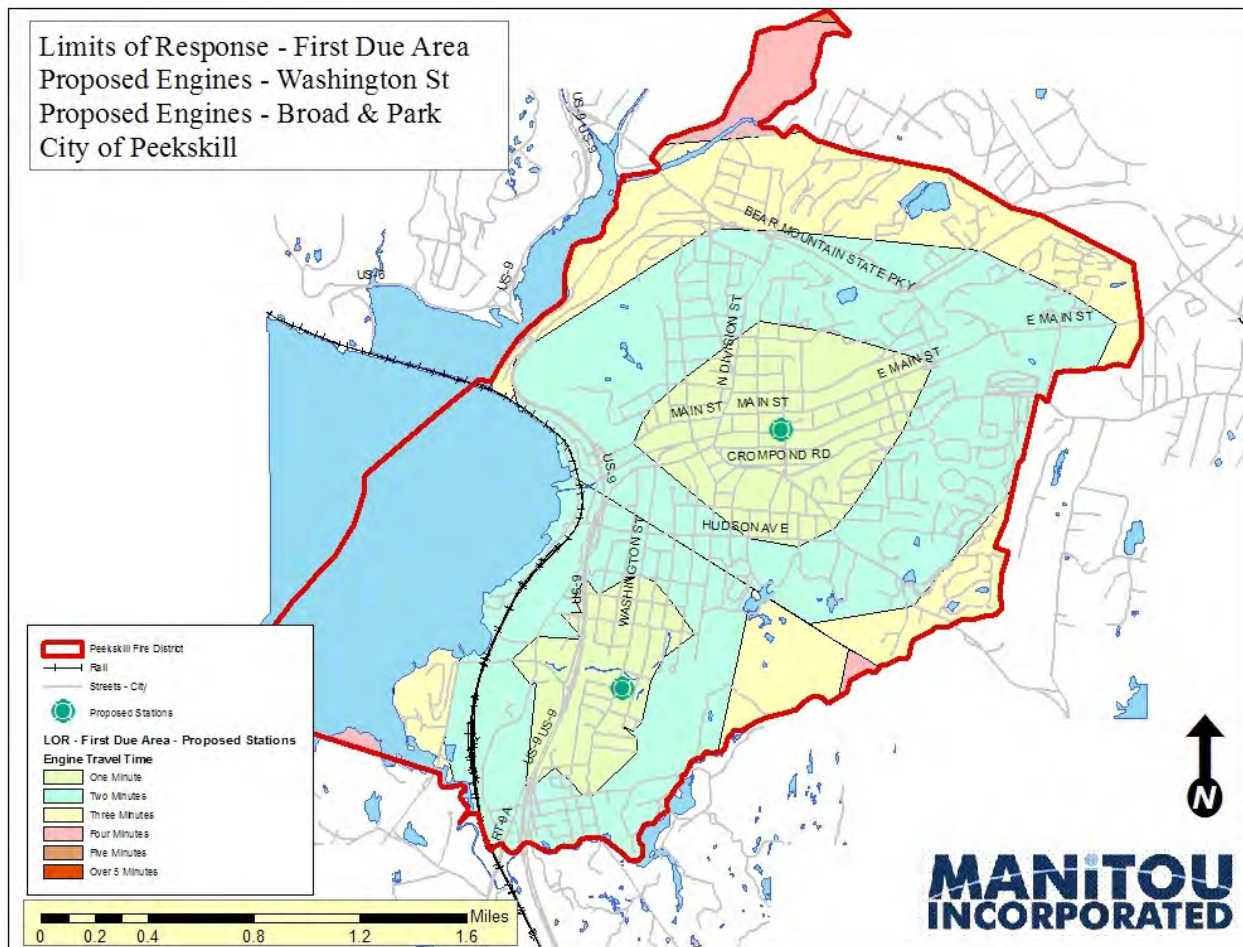


Figure 7: Engine Company Response Times with Two Stations

Mix of Apparatus and Location – The replacement of Engine 134 with a Heavy Rescue apparatus is understandable from the perspective of serving the community’s needs. However, as currently situated, when one or both of the City’s fly cars are on a call, their engine companies go unstaffed. If consolidation is not achieved, attention should be given to moving apparatus so that EMS calls do not

⁴ The information on the Insurance Services Office fire Suppression Rating Schedule (FSRS) is included for reference purposes. We do not advocate its use as a primary decision criterion in deployment of facilities and personnel.

have the potential to reduce the City's firefighting capability. In short, the Rescue should be cross-staffed with a fly car, so that EMS calls do not have the potential of reducing the City's firefighting fleet to two engines, or one when they are operating with five personnel on duty.

Consolidation of staff – The consolidation of staff will provide some added benefits in terms of flexibility. For example, having staff housed in one location would allow personnel to staff equipment as needed. In the existing system, paid staff members can only operate the equipment at their fire station. Having personnel able to staff apparatus based on need can be a great benefit operationally, as well as potentially allowing savings from the costs of operating and maintaining five separate facilities. As indicated, in the one-station option, there is a potential for poorer response times to the furthest parts of the City, but this is a worthwhile tradeoff.

Suggestions for Further Study

EMS Fly car Staffing – We attempted to get data on fly car responses, but were unsuccessful within our time requirements. We understand that the City pays for the staffing of these fly cars, and a third EMS vehicle is staffed by the Town of Cortlandt. The balance of service undertaken by these units should be examined to assure a reasonable balance of workload and costs between serving the City and Town.

Long-Range deployment options – Consideration should be given to exploring the feasibility of having volunteers play a greater role in terms of driving and operating apparatus. This would create additional flexibility for utilization of the career staff, and potentially create more appealing working conditions for both paid and volunteer personnel. This is a sensitive issue, but the *status quo* should be re-evaluated to confirm that it is still appropriate.

Appendix E

Five Candidate Sites

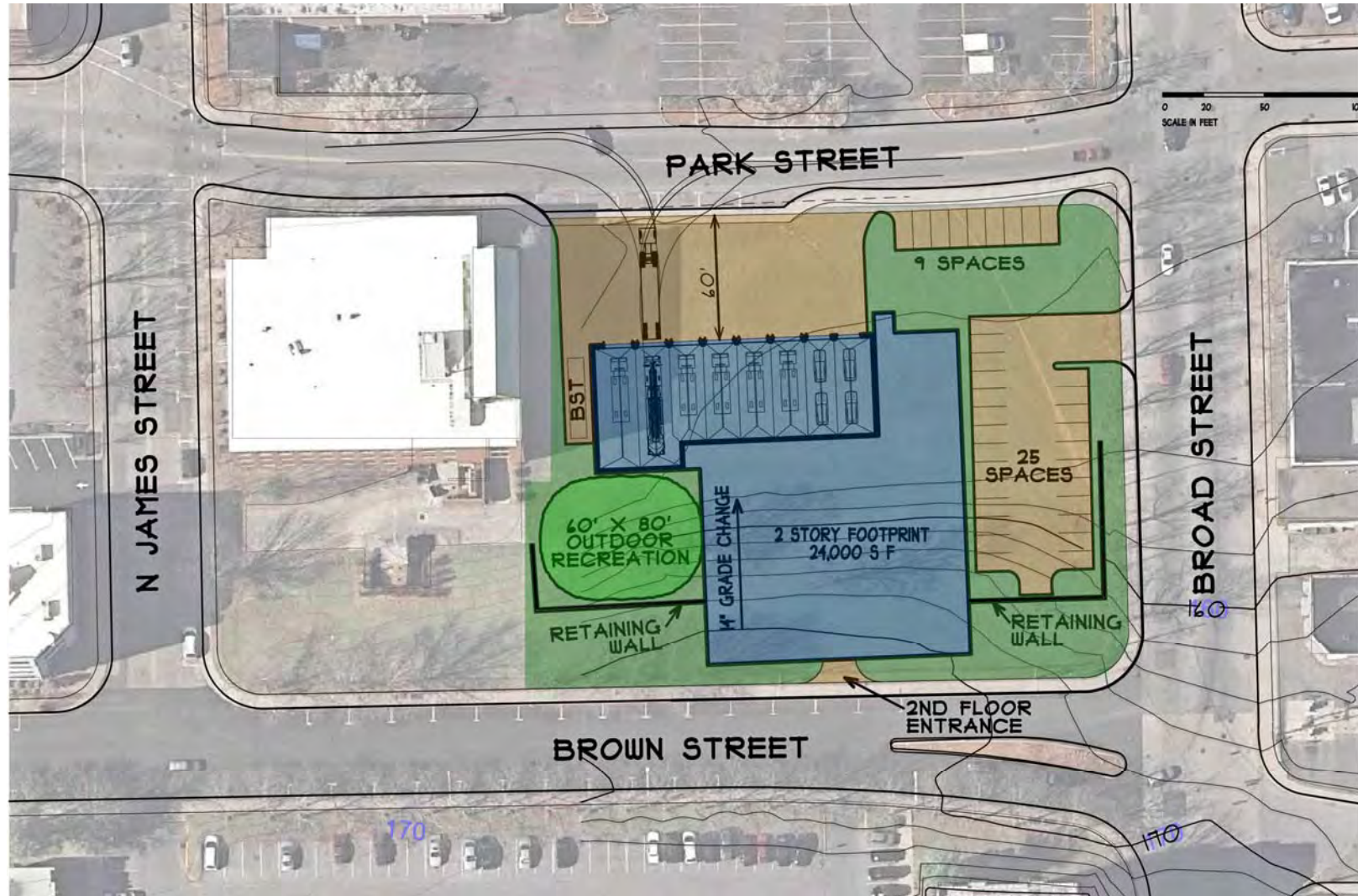
Overview of Proposed Area for New Fire Headquarters



Site 1 Base Map



Site 1 Scheme



Site 1 Required Acquisition Area



MAIN STREET

N JAMES STREET

150

REMODEL THESE
BUILDINGS
TO FACE ONTO
N JAMES STREET

MAINTAIN
ONE LANE
OF PARKING
FOR COMMERCIAL

DEMOLISH
THESE
BUILDINGS

BROAD STREET

PARK STREET



Site 2 Base Map



MANITOU
INCORPORATED

MA Mitchell
Associates
Architects

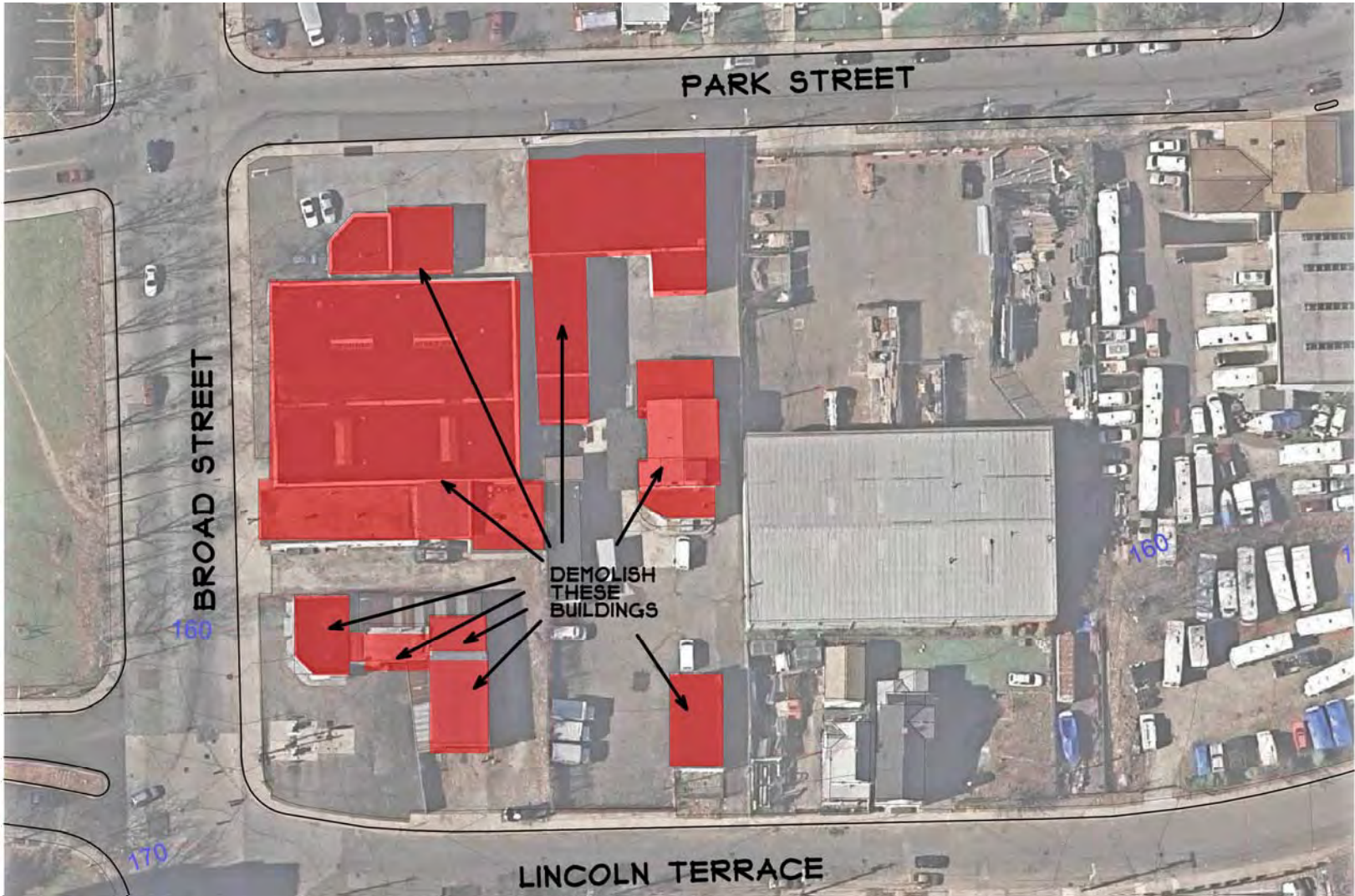
Site 2 Scheme



Site 2 Required Acquisition Area



Site 2 Required Demolition



Site 3 Base



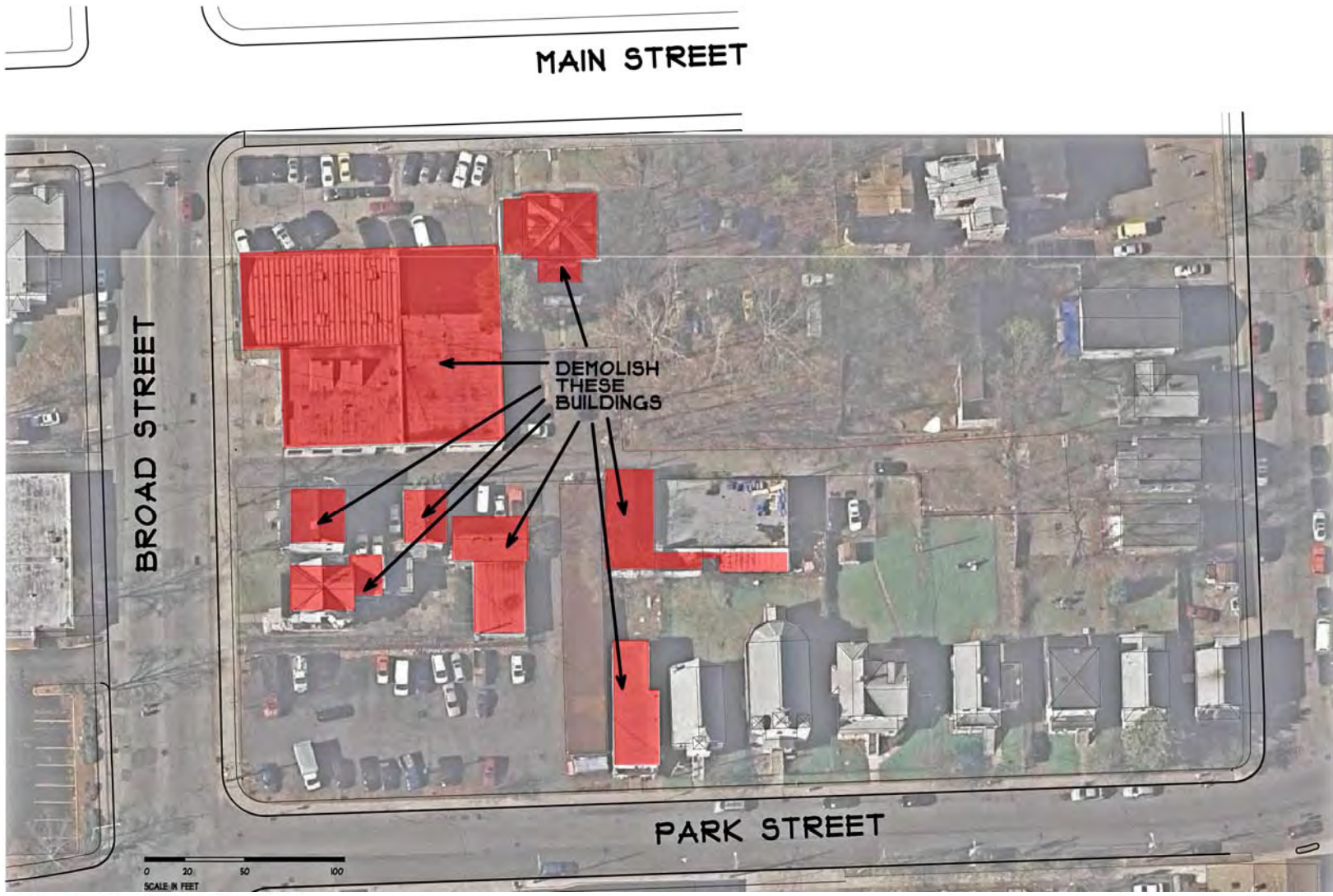
Site 3 Scheme



Site 3 Required Acquisition Area



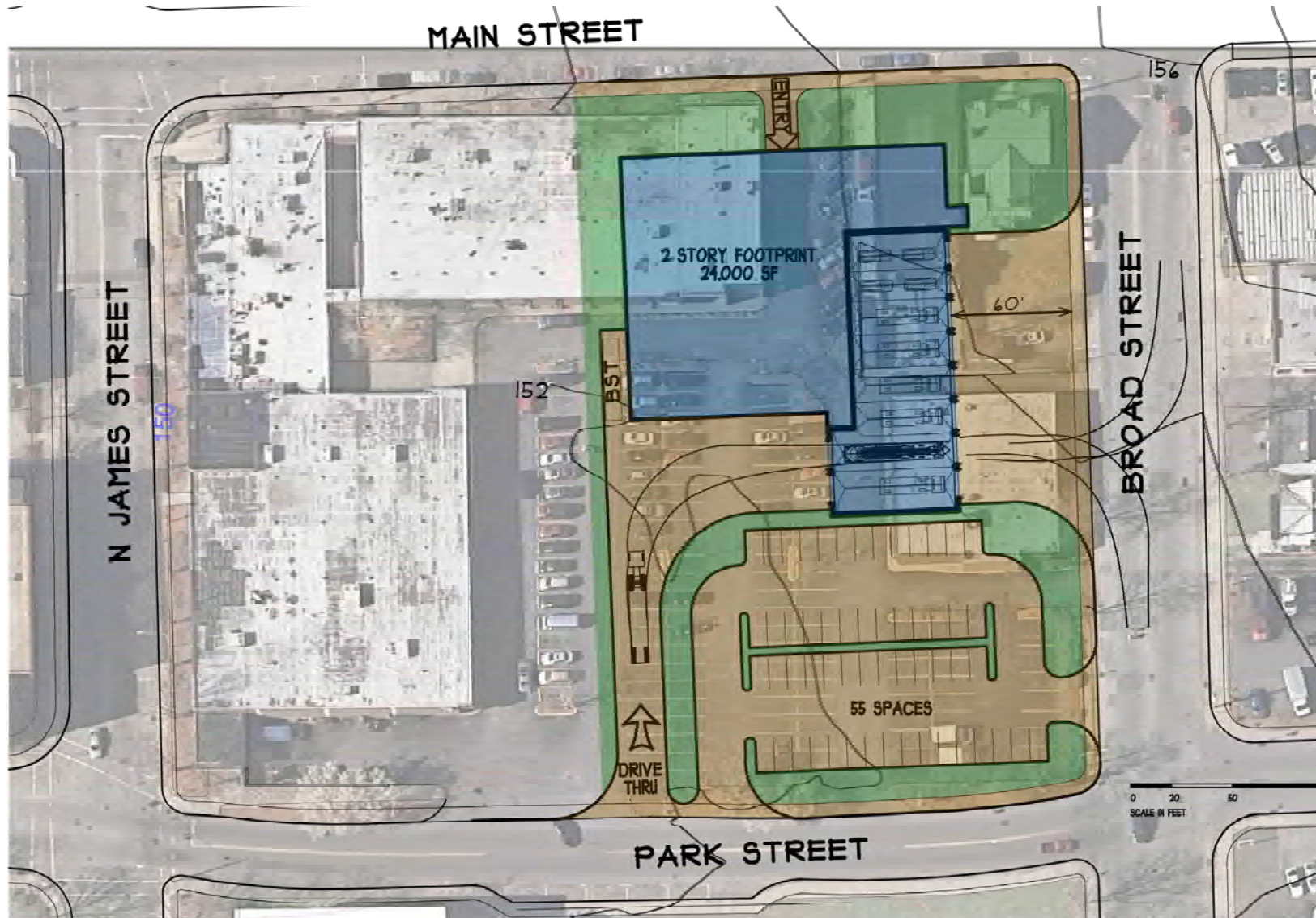
Site 3 Required Demolition



Site 4 Base Map



Site 4 Scheme



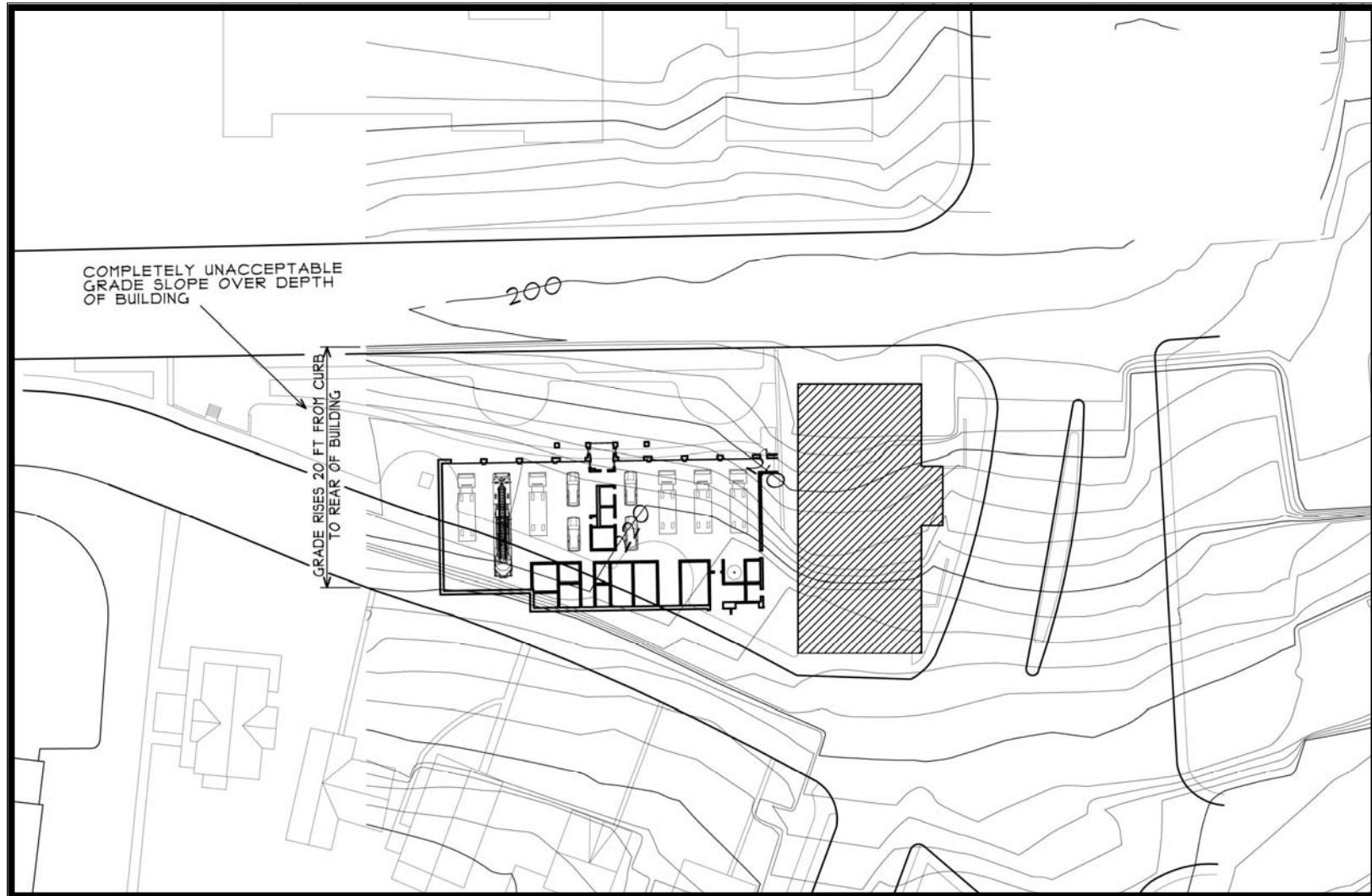
Site 4 Required Acquisition Area



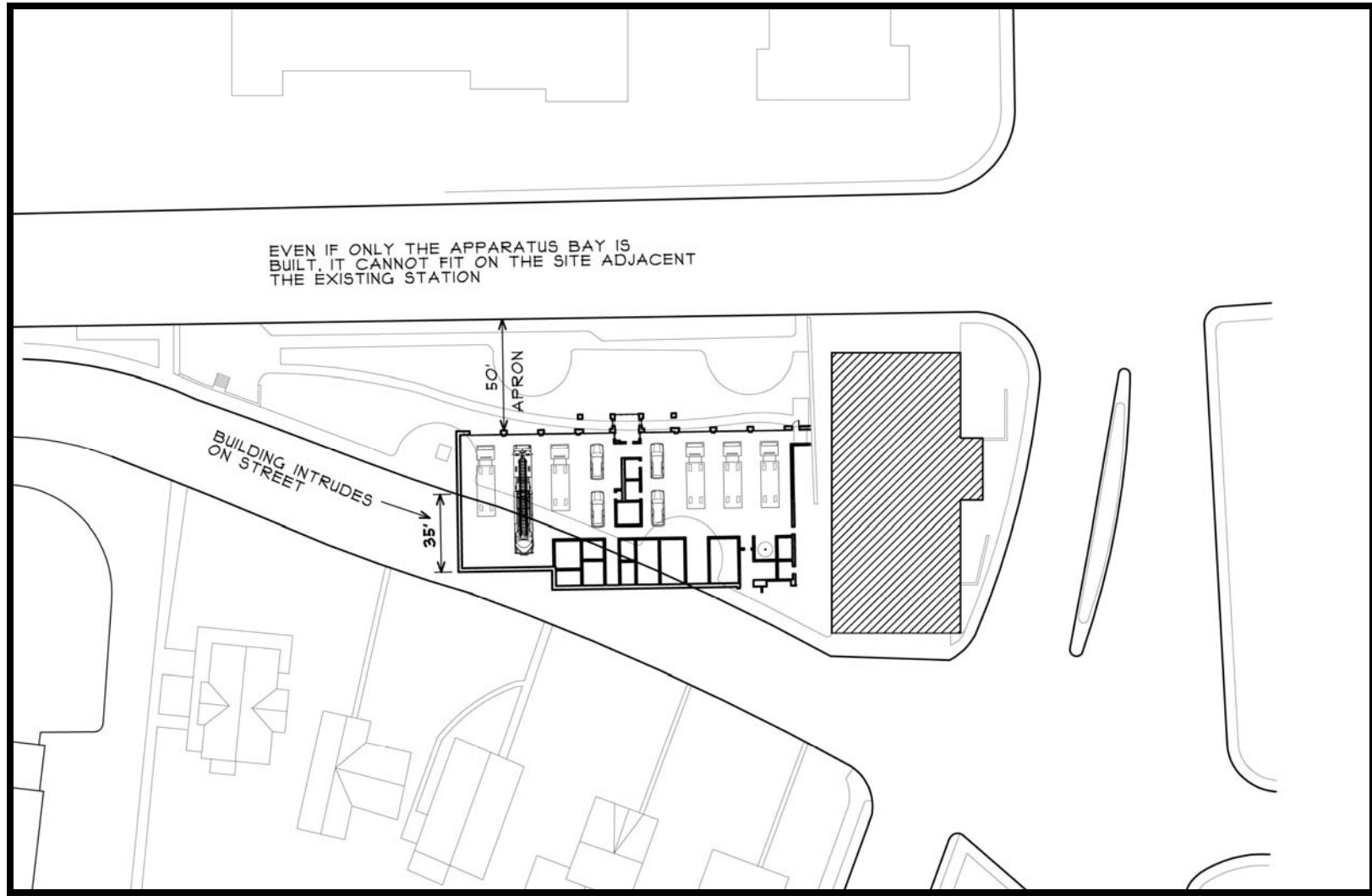
Site 4 Required Demolition



New Apparatus Bay Adjacent Existing Crompond Road Station—Slope Analysis



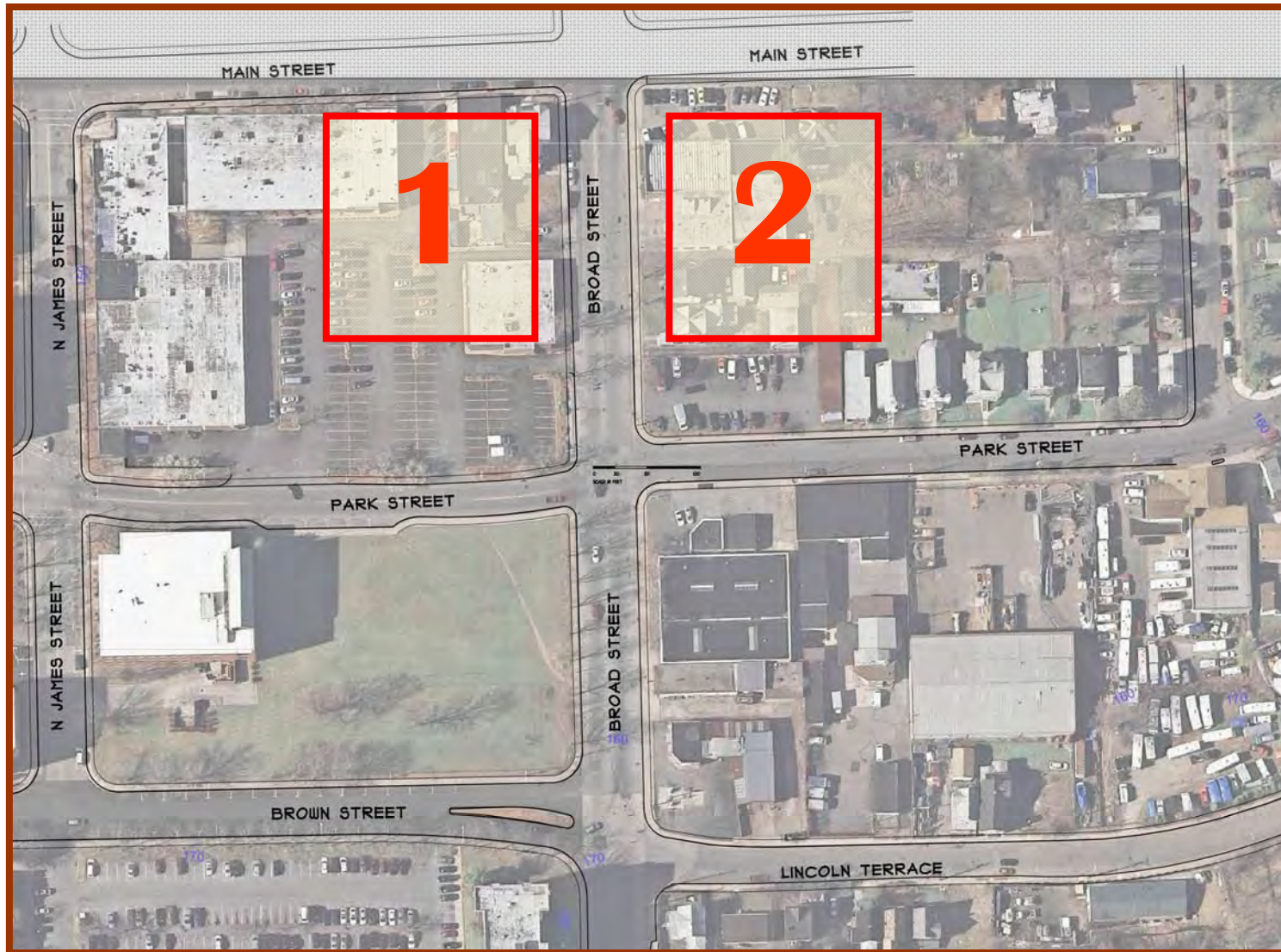
New Apparatus Bay Adjacent Existing Crompond Road Station—Layout Analysis



Appendix F

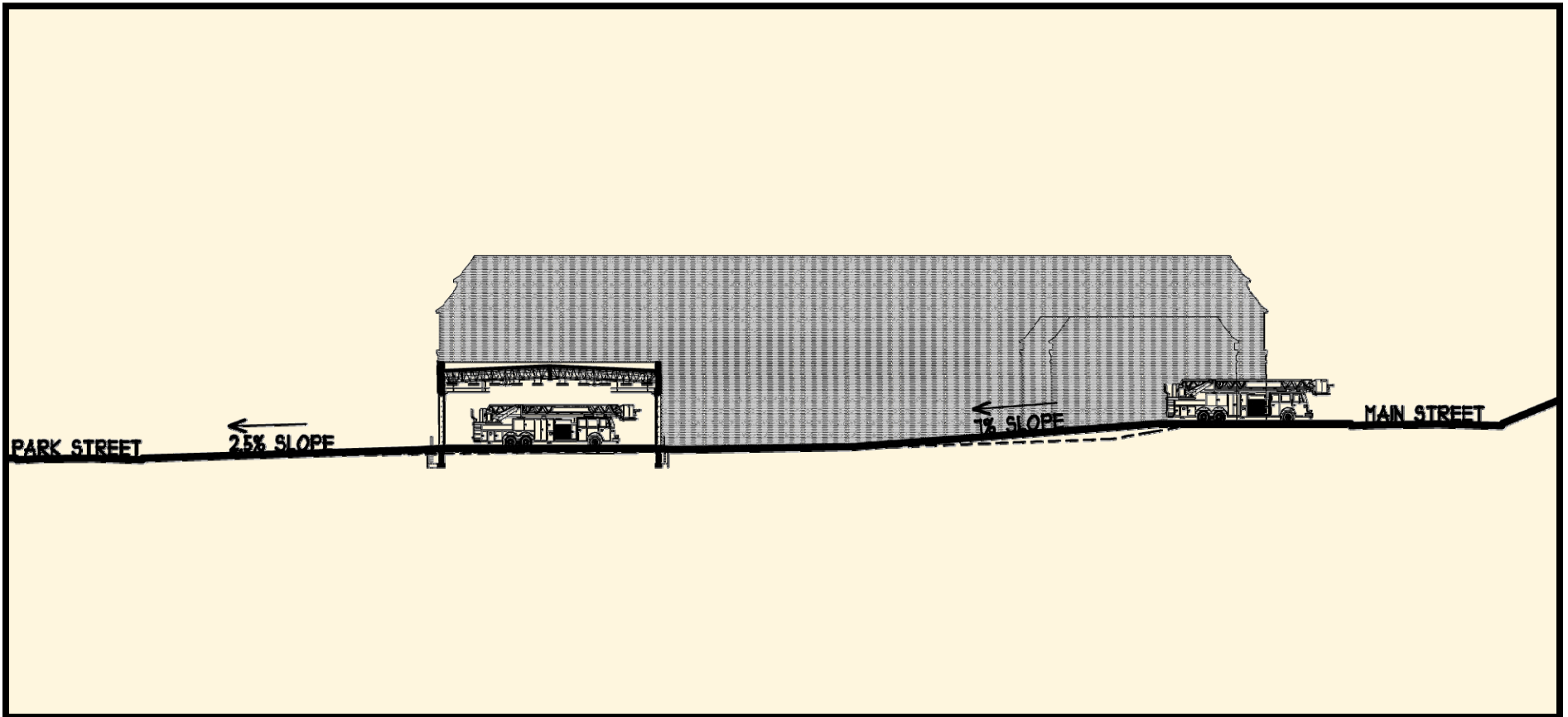
Site Development Plans For Two Sites

Selected Sites For Additional Analysis



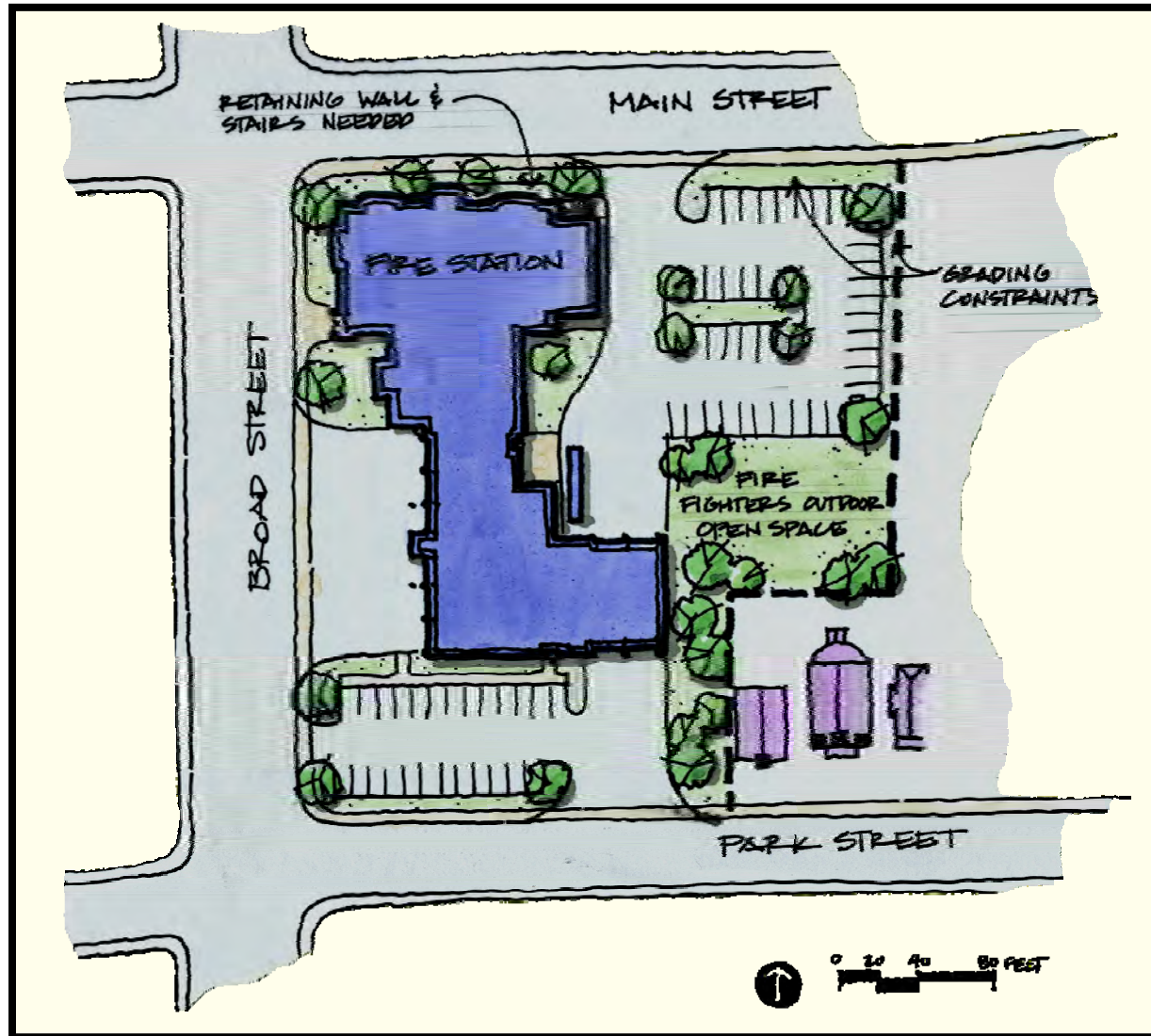
Site 3 Exit Slope Analysis

This is Site 2, not 3



Site 3 Site Development Plan

This is Site 2 not 3



This is Site 1 not 4

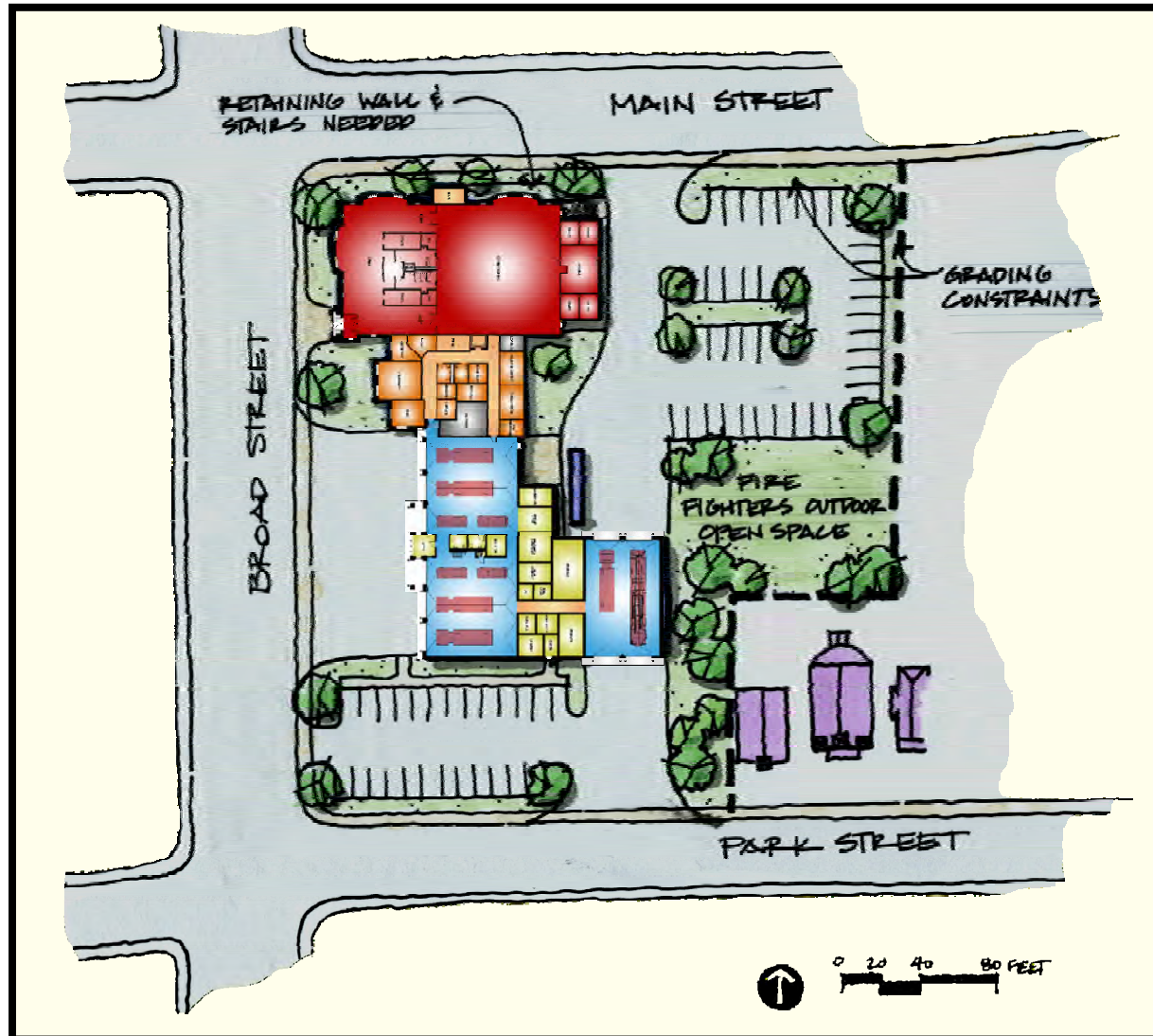
Site 4 Site Development Plan



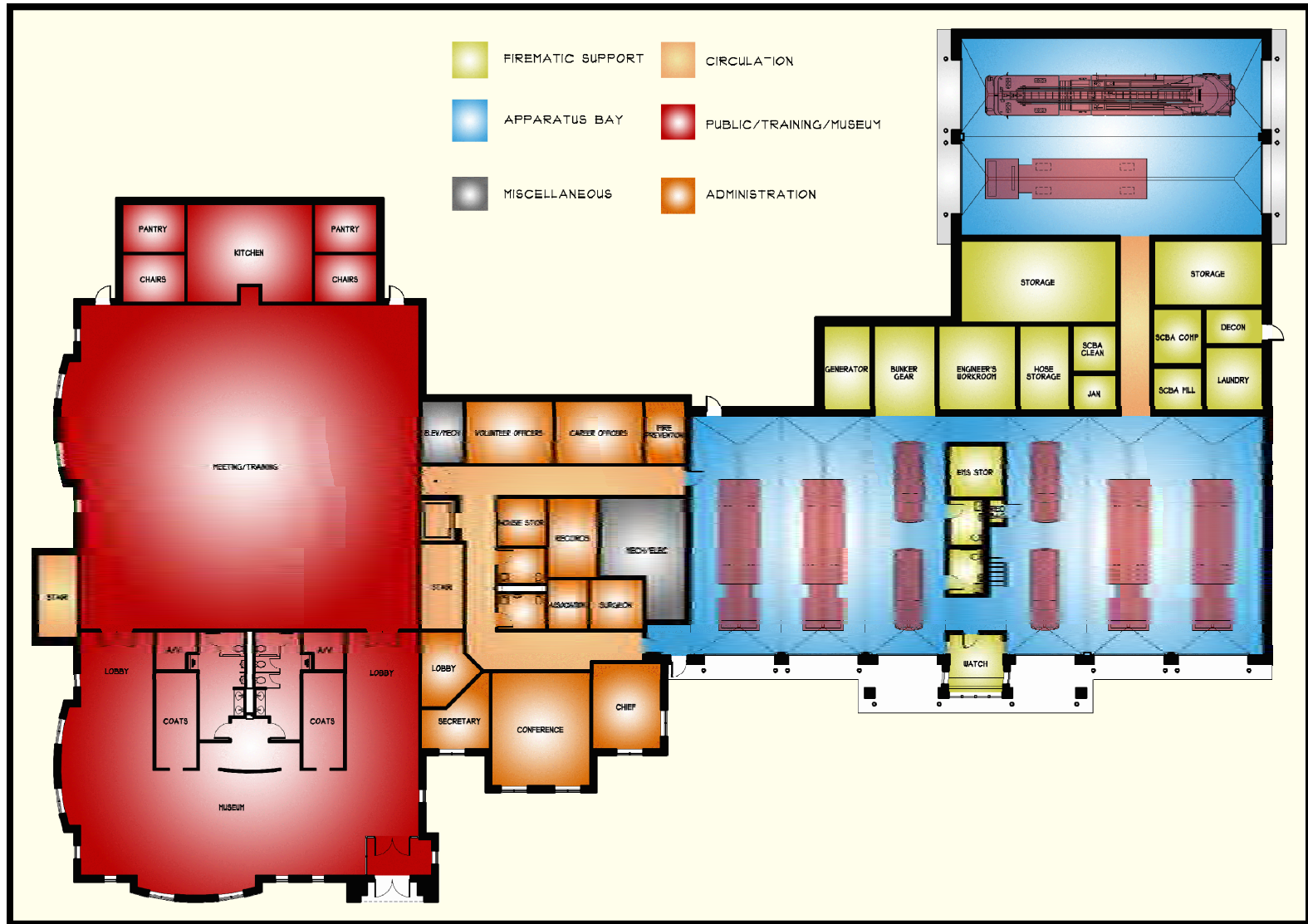
Appendix G

Floor Plans for Two Sites

Site 3 Site Development Plan With Building Floor Plan



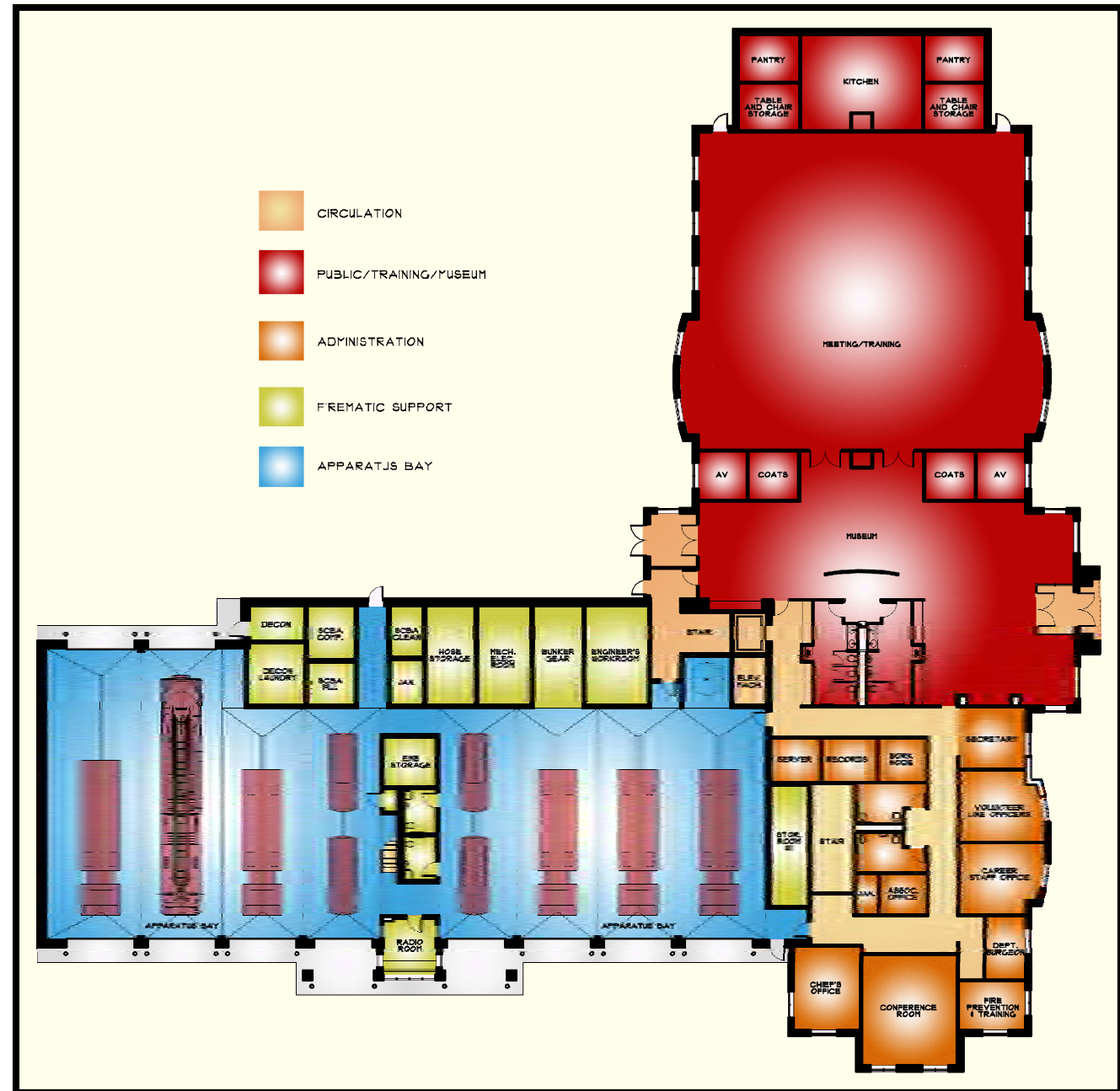
Site 3 First Floor Plan



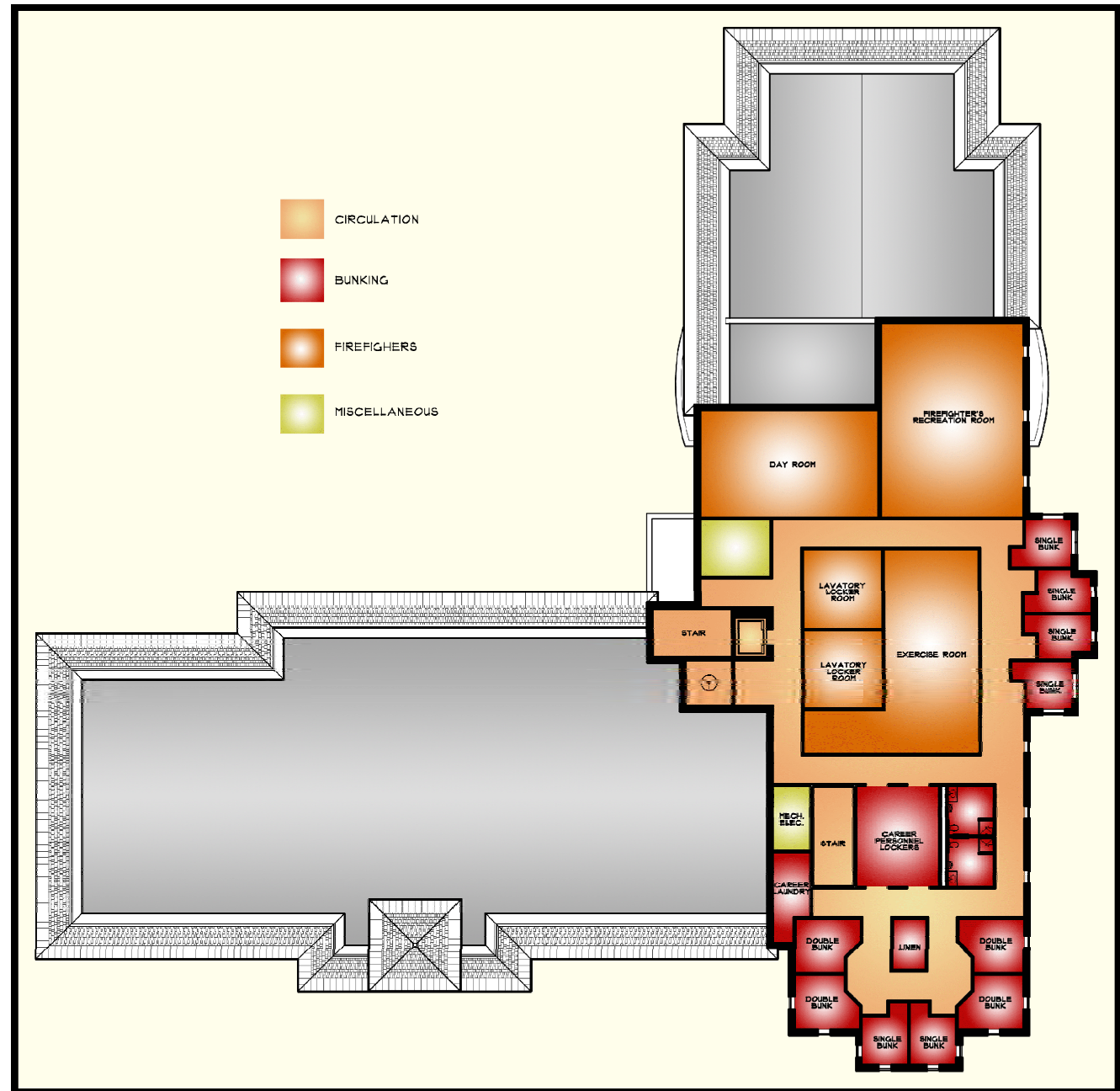
Site 4 Site Development Plan With Building Floor Plan



Site 4 First Floor Plan



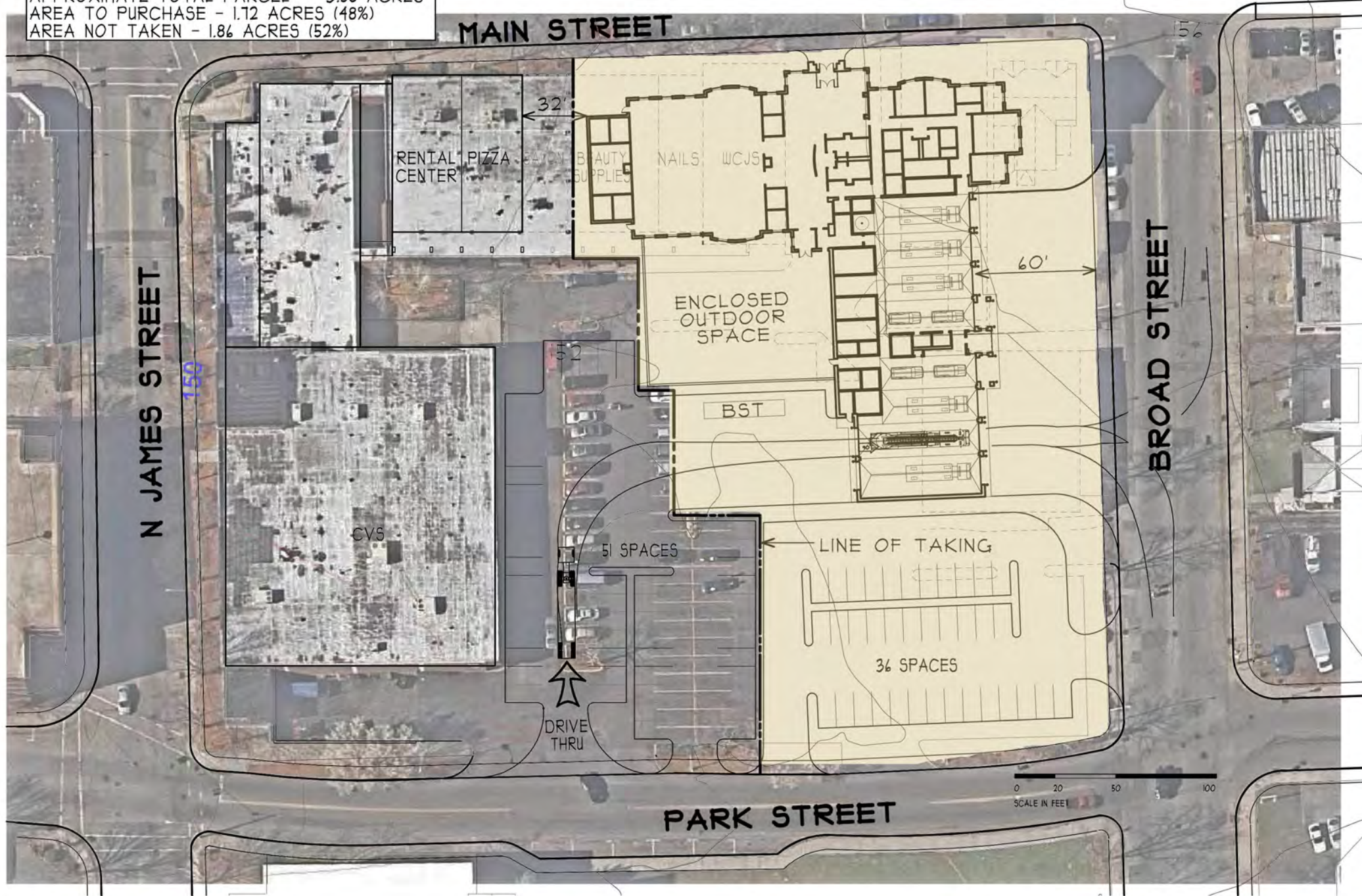
Site 4 Second Floor Plan



Appendix G

Floor Plans for Two Sites

APPROXIMATE TOTAL PARCEL - 3.58 ACRES
AREA TO PURCHASE - 1.72 ACRES (48%)
AREA NOT TAKEN - 1.86 ACRES (52%)



Appendix I Rendering



CITY OF PEEKSKILL FIRE HEADQUARTERS

Appendix J

Preliminary Estimate

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: GENERAL NOTES & QUALIFICATIONS
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:

TOTAL PROJECT COST Pg (2) \$11,167,100

1. ALL PRICES ARE BASED ON DECEMBER 2007 CONSTRUCTION COSTS W/ 12 MONTHS OF ESCALATION CALCULATED @ 6% PER ANNUM.

2. THE FOLLOWING ITEMS ARE NOT INCLUDED:

- a) PROFESSIONAL FEES
- b) FURNITURE, FURNISHINGS AND MOVABLE EQUIPMENT
- c) HAZARDOUS MATERIAL ABATEMENT
- d) CONSTRUCTION CONTINGENCY COSTS
- e) LAND ACQUISITION COSTS

3. ABNORMAL SUBSURFACE CONDITIONS ARE NOT INCLUDED.

4. THIS ESTIMATE IS BASED ON THE FOLLOWING;

SITE PLAN	08/06/08
ELEVATION 1	08/06/08
1ST FLOOR PLAN	08/06/08
2ND FLOOR PLAN	08/06/08
PICTURE	08/06/08

5. THE ESTIMATE FOR PUTNAM VALLEY FIRE STATION WAS USED AS A TEMPLATE FOR THIS ESTIMATE. QUANTITIES AND UNNIT PRICES WERE ADJUSTED TO REFLECT THIS DESIGN & SITE.

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: SUMMARY - GENERAL CONSTRUCTION
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:
GSF: 33,752

ITEM	DESCRIPTION	Area	\$/GSF	
2.00	SITE WORK	66,000	\$18.95	\$1,250,613
3.00	CONCRETE	33,752	\$11.41	\$384,946
4.00	MASONRY	33,752	\$26.90	\$907,974
5.00	METALS	33,752	\$23.91	\$807,145
6.00	WOODS & PLASTICS	33,752	\$13.55	\$457,354
7.00	THERMAL MOISTURE PROTECTION	33,752	\$23.96	\$808,703
8.00	DOORS & WINDOWS	33,752	\$7.78	\$262,610
9.00	FINISHES	33,752	\$14.16	\$477,795
10.00	SPECIALTIES	33,752	\$0.92	\$31,047
11.00	EQUIPMENT	33,752		
14.00	CONVEYING SYSTEMS	33,752	\$1.76	\$59,562
15.00	PLUMBING	33,752	\$8.93	\$301,485
15.10	FIRE PROTECTION	33,752	\$4.71	\$158,833
15.20	HVAC	33,752	\$29.41	\$992,706
16.00	ELECTRICAL	33,752	\$30.05	\$1,014,297
SUBTOTAL				\$7,915,070
GENERAL CONDITIONS - 10.0%				\$791,530
SUBTOTAL				\$8,706,600
G.C. OH & P - 10.0%				\$870,700
SUBTOTAL				\$9,577,300
DESIGN CONTINGENCY - 10.0%				\$957,700
SUBTOTAL				\$10,535,000
ESCALATION - 6.0%				\$632,100
TOTAL COST				\$11,167,100
COST PER SF				\$331

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: GENERAL CONSTRUCTION
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
2.00	SITE WORK					
	<u>Earthwork</u>					
a.	Clear & Grub Site - ALLOW	1	LS	10,000.00	10,000	
b.	Strip & Stockpile Topsoil	2,804	CY	7.00	19,628	
d.	Footing, Frost Wall & Pit Excavation	656	CY	10.00	6,560	
e.	Backfill Foundations W/ Excavated Material	500	CY	10.00	5,000	
g.	Dispose Of Excess Material (On Site)	500	CY	5.00	2,500	
h.	Erosion Control	1	LS	10,000.00	10,000	
	Demolition	1	LS	100,000	100,000	
	<u>Site Utilities</u>					
a.	Site Drainage					
	1. Trench Excavation	4,305	CY	8.00	34,440	
	2. Gravel Fill	765	CY	40.00	30,600	
	3. Filter Fabric	15,400	SF	0.25	3,850	
	4. Backfill W/ Excavated Material	3,164	CY	8.00	25,312	
	5. Dispose Of Excess Material (On Site)	1,022	CY	5.00	5,110	
	6. 15" HDPE	550	LF	35.00	19,250	
	7. 48" Subsurface Storage & Infiltration - ALLOW	700	LF	150.00	105,000	
	8. Distribution Piping - ALLOW	172	LF	23.00	3,956	
	9. Catch Basins	8	EA	1,500.00	12,000	
	10. Storm Manholes	2	EA	1,250.00	2,500	
	11. Distribution Boxes	3	EA	500.00	1,500	
	12. Oil Separator - ALLOW	1	EA	5,000.00	5,000	
d.	Electric Service - ALLOW	1	LS	20,000.00	20,000	
e.	Gas Service	By Utility Company				
	Subtotal				422,206	

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: GENERAL CONSTRUCTION
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
	Subtotal Brought Forward				422,206	
f.						
	<u>Site Improvements</u>					
b.	Site Sign & Wall					
	1. Footing Excavation	14	CY	10.00	140	
	2. Backfill W/ Excavated Material	8	CY	8.00	64	
	3. Dispose Of Excess Material (On Site)	7	CY	5.00	35	
	4. Conc. Footings	2	CY	350.00	700	
	5. Conc. Frost Wall	4	CY	500.00	2,000	
	6. CMU Wall (2 Wythe)	118	SF	40.00	4,720	
	7. Wall Cap - ALLOW	18	LF	75.00	1,350	
	8. Signage	1	LS	1,500.00	1,500	
c.	Asphalt Paving					
	1. Light Duty Paving	2,500	SY	25.00	62,500	
	2. Heavy Duty Paving	935	SY	32.00	29,916	
	3. Extra Heavy Duty Paving	1,654	SY	35.00	57,874	
d.	Conc. Curb @ Rear Entry	130	LF	35.00	4,550	
e.	Conc. Sidewalk - ALLOW	1,630	SF	5.00	8,150	
f.	Conc. Landing Pads @ Entry Doors	275	SF	7.00	1,925	
g.	Parking Lot Striping					
	1. Std.	50	EA	25.00	1,250	
	2. Hdcp.	5	EA	75.00	375	
h.	Topsoil & Seed W/ Stockpiled Topsoil	25,000	SF	0.20	5,000	
i.	Landscaping - ALLOW	1	LS	15,000.00	15,000	
j.	Irrigation System - ALLOW	1	LS	25,000.00	25,000	
						644,255
						18.95

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJ: GENERAL CONSTRUCTION
PROJ: PEEKSKILL FIRE HEADQUARTERS
LOC: PEEKSKILL, NY
TYPE: CONCEPTUAL/MASTER PLAN
CLIN: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
3.00 CONCRETE						
a.	Cont. Conc. Footings	85	CY	350.00	29,750	
b.	Conc. Spread Footings	11	CY	375.00	4,125	
c.	Conc. Piers	8	CY	750.00	6,000	
d.	Conc Walls (Foundation Wall)	116	CY	650.00	75,400	
e.	Conc. Frost Walls	36	CY	650.00	23,400	
f.	Conc. Elevator Slab	4	CY	350.00	1,400	
g.	Conc. Elevator Pit Walls	5	CY	500.00	2,500	
h.	Grade Beam @ Apparatus Bay Approach Slab	10	CY	500.00	5,000	
i.	Bollard Footings	10	EA	200.00	2,000	
j.	7" Conc. Slab On Grade W/ Gravel Fill @ Apparatus Bay	7,243	SF	9.00	65,187	
k.	4" Conc. Slab On Grade W/ Gravel Fill @ Remaining Spaces	17,068	SF	6.50	110,942	
l.	2nd Floor Conc. (On Mtl. Deck)	9,442	SF	5.00	47,210	
m.	Mezz. Conc. (On Mtl. Deck)	2,238	SF	5.00	11,190	
n.	Conc. Fill (On Mtl. Pan Stairs)	233	RFT	10.00	2,330	
o.	Conc. Fill (On Mtl. Pan Stair Landings)	112	SF	10.00	1,120	
p.	Conc. Locker Bases	22	SF	10.00	220	
						387,774
						11.41
4.00 MASONRY						
a.	Brick	12,000	SF	28.00	336,000	
b.	Precast	10,000	SF	35.00	350,000	
c.	12" CMU Backup @ Apparatus Bay	1,762	SF	17.50	30,835	
d.	Precast Sills	170	LF	35.00	5,950	
e.	Interior CMU Walls					
	1. 12" CMU	2,620	SF	15.00	39,300	
	2. 8" CMU	3,618	SF	14.50	52,461	
	Precast Specials	1,168	SF	75.00	87,600	
	Heads	50	EA	250.00	12,500	
						914,646
						26.90

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: GENERAL CONSTRUCTION
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
5.00	METALS					
a.	Structural Steel at 10# per SF	170	TONS	4,250.00	722,500	
b.	Mtl. Floor Deck	9,442	SF	2.75	25,966	
c.	Loose Lintels					
	1. Windows & Doors	261	LF	35.00	9,135	
	2. Apparatus Bay Doors	150	LF	70.00	10,500	
d.	Mtl. Pan Stairs	233	RFT	65.00	15,145	
e.	Mtl. Pan Landings	112	SF	15.00	1,680	
f.	Full Height Stair Railings	26	LF	100.00	2,600	
g.	Wall Mounted Handrails	170	LF	45.00	7,650	
h.	Mezz. Railing	75	LF	100.00	7,500	
i.	Mezz Railing Gate	1	EA	400.00	400	
j.	Conc. Filled Bollards	10	EA	650.00	6,500	
k.	Misc. Metals	1	LS	3,500.00	3,500	
						813,076
						23.91
6.00	WOODS & PLASTICS					
	<u>Rough Carpentry</u>					
a.	L.G. 6" Mtl. Wall Framing	11,282	SF	12.00	135,384	
b.	L.G. 6" Mtl. Wall Framing @ Deck (Half Wall)	187	SF	15.00	2,805	
c.	L.G. Mtl. Truss System	13,970	SF	8.00	111,760	
d.	L.G. Mtl. Build Over Framing	1,810	SF	15.00	27,150	
e.	Dens Glass Wall Sheathing	11,282	SF	3.25	36,667	
f.	Roof Sheathing	14,081	SF	3.00	42,243	
g.	Sub Fascias & Rakes	684	LF	4.00	2,736	
h.	Misc. Rough Blocking	1	LS	5,000.00	5,000	
	<u>Finish Carpentry</u>					
a.	Corian Window Sills	156	LF	30.00	4,680	
b.	Sloped Laminate Sills @ Radio Rm.	14	LF	20.00	280	
c.	Display Cases	37	LF	250.00	9,250	
d.	Millwork @ Radio Room - ALLOW					
	1. Work Station	26	LF	230.00	5,980	
	2. Full Height Cabinet	1	EA	2,000.00	2,000	
e.	Kitchen @ Day Rm. - ALLOW					
	1. Wall Cabinets	21	LF	155.00	3,255	
	2. Base Cabinets	36	LF	200.00	7,200	
	3. Counter Top	74	SF	30.00	2,220	
f.	Millwork @ Fill Room - ALLOW					
	.1 Work Bench	13	LF	155.00	2,015	
	.2 Base Cabinet w/ Counter Top	8	LF	260.00	2,080	
	.3 Wall Cabinets	8	LF	155.00	1,240	
	Subtotal				403,945	

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: GENERAL CONSTRUCTION
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO.:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
	Subtotal Brought Forward				403,945	
g.	Wall Mounted Lav. Counters @ Toilet Room	23	LF	80.00	1,840	
h.	Recreation Rm Kitchen - ALLOW					
	1. Wall Cabinets	36	LF	155.00	5,580	
	2. Base Cabinets	29	LF	200.00	5,800	
	3. Counter Top	64	SF	30.00	1,920	
	4. Pantry Cabinets	8	LF	500.00	4,000	
i.	Built In Workstations	121	LF	130.00	15,730	
k.	Workstation Shelving Cabinets - ALLOW	42	LF	100.00	4,200	
l.	Dividers @ Junior Officer Workstations	4	EA	150.00	600	
m.	Cont. Casework @ Conference Rms. - ALLOW	20	LF	300.00	6,000	
n.	Coat Rm. Shelves & Poles	42	LF	25.00	1,050	
o.	Pantry Shelves	435	LF	15.00	6,525	
p.	Decorative Columns @ Circulation	4	EA	650.00	2,600	
q.	Closet Pole & Shelve @ Chiefs Office	6	LF	25.00	150	
r.	Half Wall Cap	19	LF	25.00	475	
s.	Serving Window Cased Opening	1	LS	300.00	300	
						460,715
						13.55
7.00	THERMAL MOISTURE PROTECTION					
a.	Foundation Waterproofing	5,722	SF	3.00	17,166	
b.	Foundation Perimeter Insulation	4,448	SF	2.00	8,896	
c.	Elevator Pit Waterproofing	219	SF	15.00	3,285	
d.	Cont. Footing Drain	560	LF	10.00	5,600	
e.	Trench Drain	285	LF	55.00	15,675	
f.	2 1/2" Rigid Insul	1,762	SF	2.25	3,965	
g.	2" Rigid Insul	10,521	SF	2.00	21,042	
h.	R : 30 Insulation	10,521	SF	1.55	16,308	
i.	R : 38 Insulation	13,241	SF	1.85	24,496	
j.	EIFS	761	SF	10.00	7,610	
k.	EIFS @ Deck Half Wall	374	SF	10.00	3,740	
l.	EIFS Soffits @ Entries	275	SF	12.00	3,300	
m.	Vented Mtl. Soffits @ Rakes & Eaves	1,228	SF	3.50	4,298	
n.	Formed Mtl. Trim @ Fascias & Rakes	684	LF	3.00	2,052	
o.	EPDM Roof	22,084	SF	18.00	397,512	
p.	Slate Roof	8,000	SF	20.00	160,000	
q.	Copper Roof	3,200	SF	35.00	112,000	
r.	Scuppers	10	EA	200.00	2,000	
s.	Gutters	320	LF	6.00	1,920	
t.	Leaders - ALLOW	40	LF	7.00	280	
u.	Misc. Caulking & Sealants	1	LS	3,500.00	3,500	
						814,645
						23.96

NASCO
CONSTRUCTION SERVICES INC.

SUBJECT: GENERAL CONSTRUCTION
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
REV. DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
8.00	DOORS & WINDOWS					
a.	Overhead Doors Apparatus Bay Doors	10	EA	5,800.00	58,000	
b.	Alum. Glass Entrance Doors, Frames & Hardware					
	1. Single (Exterior)	1	EA	3,750.00	3,750	
	2. Double (Exterior)	2	PAIRS	7,500.00	15,000	
	3. Double (Interior)	2	PAIRS	6,750.00	13,500	
	4. Transoms	20	SF	80.00	1,600	
c.	Solid Core Wood Doors, H.M. Frames & Hardware					
	1. Single	53	EA	850.00	45,050	
	2. Double	5	PAIRS	1,500.00	7,500	
d.	Hollow Metal Doors, Frames & Hardware					
	1. Single (Exterior)	5	EA	1,200.00	6,000	
	2. Double (Exterior)	1	PAIRS	2,100.00	2,100	
	3. Single	15	EA	1,000.00	15,000	
	4. Double	4	PAIRS	1,900.00	7,600	
e.	Bi-Fold Pass Thru Window @ Kitchen	1	EA	500.00	500	
f.	Alum. Clad Wood Windows	1,167	SF	70.00	81,690	
g.	Interior Glazing	150	SF	40.00	6,000	
h.	Mezzanine Training Hatch	1	EA	1,250.00	1,250	
						264,540
						7.78
9.00	FINISHES					
a.	Gypsum Partitions (Taped & Spackled)					
	1. 4 1/2" Wall	13,105	SF	6.00	78,630	
	2. 6" Wall	2,955	SF	6.50	19,208	
	3. Chase Wall	1,023	SF	7.50	7,673	
	4. Furring	3,143	SF	3.75	11,786	
	5. 6" Half Wall	19	LF	60.00	1,140	
	6. 5/8" Gyp. Board (On L.G. Mtl. Framing)	11,282	SF	2.25	25,385	
b.	Floor					
	1. Ceramic Tile	5,024	SF	9.00	45,216	
	2. Quarry Tile @ Kitchen & Pantry	824	SF	12.00	9,888	
	3. VCT	3,735	SF	2.75	10,271	
	4. Carpet - Allow \$20/SY For Material	365	SY	30.00	10,950	
	5. Epoxy System on Apparatus Floor	7,243	SF	6.00	43,458	
	5. Epoxy System on Apparatus Support	1,535	SF	4.50	6,908	
	6. Seal Exposed Concrete	1,000	SF	0.25	250	
	7. Rubber Flooring @ Gym	1,000	SF	12.00	12,000	
c.	Ceiling					
	1. Paint Exposed	10,577	SF	1.25	13,221	
	2. ACT	12,131	SF	4.00	48,524	
	3. Kitchen ACT	428	SF	6.50	2,782	
	4. Bathroom ACT	928	SF	5.00	4,640	
	5. Misc. Soffits - ALLOW	1	LS	10,000.00	10,000	
d.	Base					
	1. Ceramic Tile	1,522	LF	8.50	12,937	
	2. Quarry Tile	213	LF	12.00	2,556	
	3. Rubber	1,443	LF	3.00	4,329	
	Subtotal				381,752	

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: GENERAL CONSTRUCTION
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
DATE: 08-08-08
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ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
	Subtotal Brought Forward				381,752	
e.	Wall					
	1. Ceramic Tile	3,568	SF	8.00	28,544	
	2. Paint GWB	28,356	SF	0.90	25,520	
	3. Epoxy Paint @ Conc & CMU Walls	16,266	SF	1.65	26,839	
f.	Paint					
	1. Doors & Frames	91	LVS	150.00	13,650	
g.	Misc. Finishes	1	LS	5,000.00	5,000	481,305
						14.16
10.00	SPECIALTIES					
a.	Toilet Partitions					
	1. Standard	6	EA	750.00	4,500	
	2. Handicap	4	EA	850.00	3,400	
	3. Urinal Screen	3	EA	250.00	750	
b.	Privacy Curtain @ Toilet Room	2	EA	50.00	100	
c.	Toilet Accessories	1	LS	5,000.00	5,000	
d.	Lockers	23	EA	275.00	6,325	
e.	Benches - ALLOW	10	EA	200.00	2,000	
f.	Cupola @ Roof - Complete	1	LS	5,000.00	5,000	
g.	Fire Extinguishers & Cabinets - ALLOW	1	LS	500.00	500	
h.	Flag Poles	1	LS	2,200.00	2,200	
j.	Signage	1	LS	1,500.00	1,500	31,275
						0.92
11.00	EQUIPMENT					
a.	Commercial St. Stl. Kitchen - ALLOW		LS	75,000.00		
14.00	CONVEYING SYSTEMS					
a.	2 Stop Elevator, 1 Opening Per Stop	1	EA	60,000.00	60,000	60,000
						1.76

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: MEPS
PROJECT: PEEKSKILL FIRE HEADQUARTERS
LOCATION: PEEKSKILL, NY
TYPE EST.: CONCEPTUAL/MASTER PLAN
CLIENT: MITCHELL ASSOCIATES ARCHITECTS

EST. NO:
EST. BY: EH
CHKD. BY:
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REV. DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	TOTAL
15.00	PLUMBING					
	a. Fixtures	37	FIXT	4,500.00	166,500	
	b. 6" Cast Iron Pipe For Trench Drain	120	LF	25.00	3,000	
	c. Underslab Bldg Waste	1	LS	12,500.00	12,500	
	d. Interior Drains	10	EA	1,500.00	15,000	
	e. 75 Gal. Gas Fired DHW Heaters	2	EA	850.00	1,700	
	f. Decon Shower Unit	1	EA	3,000.00	3,000	
	g. Radiant Heating System for Apparatus Bay	10,000	SF	10.00	100,000	
	h. Hose Reels	4	EA	500.00	2,000	
						303,700
						9
15.10	FIRE PROTECTION					
	a. Apparatus Bay	10,000	SF	4.00	40,000	
	b. Remaining Spaces	24,000	SF	5.00	120,000	
						160,000
						5
15.20	HVAC					
	a. Apparatus Bay Ventilation	10,000	SF	4.00	40,000	
	b. Remaining Spaces	24,000	SF	40.00	960,000	
						1,000,000
						29
16.00	ELECTRICAL					
	a. Apparatus Bay	10,000	SF	15.00	150,000	
	b. Remaining Spaces	24,000	SF	35.00	840,000	
	c. Site Electric					
	.1 Pole Mounted Fixture	8	EA	2,000.00	16,000	
	.2 Building Mounted Fixture	21	EA	750.00	15,750	
						1,021,750
						30