

# FIRE STATION FACILITIES ASSESSMENT AND SITE FIT PLAN

**City of Belfast**  
**Public Safety Facility – Police/Fire/EMS**  
**Belfast, Maine**



Prepared For:

**City of Belfast**  
131 Church Street  
Belfast, Maine 04915

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Final Submission

Prepared By:



**OAK POINT**  
ASSOCIATES

architecture  
engineering  
planning

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- Appendix B – Functional Relationship Diagrams**
- Appendix C – Site Fit Plan**
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## 1. EXECUTIVE SUMMARY

This Building Assessment Report includes a review of the existing fire station building conditions and deficiencies. New building programs were developed with user input to document the projected needs for both the Fire/EMS and Police Departments for the next 25 years (refer to Appendix D). Functional relationship space diagrams were created for both the Fire and Police Departments to show the preferred adjacencies between the various user groups and relative sizes of the spaces (refer to Appendix B). Also considered was the position of the existing fire station and fire station museum on the site, as well as the buildable area of the existing site. The potential for expanding the fire station and adding a new police station was evaluated, including the user estimated parking requirements. Site limitations include stream setbacks, wetland buffer zones, and property line setbacks. After evaluation of the existing building conditions, buildable site area, and new building programs, and in order to include both the Fire/EMS and Police Departments on the same site, it is recommended that the existing fire station and museum be demolished. A Concept Site Fit Plan is included in Appendix C to demonstrate a possible combined Fire/Fire Museum/EMS/Police Public Safety Facility, including parking and adequate clearances for fire truck apparatus bays.

The existing fire station is not recommended for renovation/additions due to the poor existing conditions and structural deficiencies.

## 2. INTRODUCTION

The intent of this report is to provide the City of Belfast an evaluation of the existing fire station and its site on Main Street and also evaluate if there is sufficient buildable area to allow the Fire/EMS/Police Departments to be combined with construction of a new police station. Investigations included on-site observations and detailed discussions with Police Chief Cormier and Fire Chief Richards, who provided requested space needs and sizes including estimated 25 year future growth. The detailed space requirements have been documented in the program worksheets located in Appendix D and were used to establish the building footprints used in the Site Fit Plan provided in Appendix C. Also provided in Appendix B are space relationship bubble diagrams which can be used to develop detailed floor plans.

### 3. EXISTING CONDITIONS

#### 3.1 Civil

The existing fire station is located at 373 Main Street (also known as Belmont Avenue). According to the assessor's records the property is on tax map 12, lot 50 and contains approximately 44 acres. The site is bisected by a stream running from the south to the north and into the Passagassawakeag River. Approximately 30 acres has been developed as a cemetery on the east and northern portions of the site. Approximately 2.3 acres at the southwest side of the site is developed for the existing fire station and a snow dump. The site is bound by Main Street to the south, a stream and cemetery to the east, a wooded wetland to the north, and a wetland and auto parts store to the west. Starrett Drive is due south of the existing Fire station driveway. Starrett Drive has many businesses including Ocean State Job Lot and a Hannaford Supermarket, the intersection is signalized.

Existing ground surfaces are a combination of turf, pavement, and gravel with little or no landscaping. The paved driveway between the Fire Station and the public road is approximately 155-feet by 125 feet and is in relatively good condition with some cracking. There is a small 21-foot by 70-foot gravel parking area on the west side of the front of the building. A 15-foot-wide gravel driveway exists between the Museum and the Fire Station that leads to an irregular shaped gravel area behind the Fire station. The existing condition survey indicates a portion of the property behind the fire station is used as a snow dump. The upland area behind the fire station is approximately 200-feet by 250-feet (50,000 sf) approximately 16,000 sf is gravel and the remainder is turf.

Topography in the vicinity of the existing fire station is gently sloping between 1 and 3 percent

for the developed portion of the site with steeper slopes at the edge of the filled area. Based upon the five-to-six-foot drop-off at the edge of the developed area and the adjacent wetlands, the site is likely to have been filled in the past. The quality of fill and soil suitability has not been investigated at this time.

The wetlands appear to be wooded wetland type and the existing streams to the east and north are protected by the Natural Resources Protection Act (NRPA). Soil disturbance within 75 feet of the streams will require NRPA Permitting. Soil disturbance between 25 and 75 feet from the stream may qualify for a Permit By Rule Notification. The cost for NRPA Permit By Rule Notification preparation and fees is relatively minor. Soil disturbance between 25 feet and the stream will require an individual NRPA permit. Soil disturbance within the wooded wetlands would also require an individual NRPA permit. The cost of the NRPA Individual Wetland Permit preparation and fees can be significant, especially for impacts greater than 15,000 sf.

Existing utilities in the vicinity of the existing fire station include public water and sewer. Three-phase power exists on the south side of Main Street and a single-phase line provides service to the existing fire station. Overhead communication lines for telephone and internet/cable tv service the existing Fire Station.

Subsurface soil investigations and environmental soil testing have not been performed as part of this study and are recommended should the project move forward.

#### 3.2 Structural

##### 3.2.1 Fire Station

The existing fire station consists of the original building with six overhead doors and an addition added in 2012 with two overhead doors. No

original drawings were available for the original building; however, existing condition drawings were available for the 2012 addition. A site visit was conducted on March 20, 2024.

The original fire station is a single-story building with a gable roof, framed with pre-engineered metal plate-connected wood trusses at approximately 2-feet on-center (refer to Structural Photo S1 in Appendix A). Roof sheathing is plywood roof sheathing. Although the exterior wall framing was not visible during the walk through of the building, it is assumed that the exterior walls are 2x wood framing with exterior plywood wall sheathing. The foundation walls are concrete and extend approximately 2-feet above the finished floor on the back and sides of the building. At the front of the building, where the overhead doors are located, the top of the foundation wall is at the elevation of the finished floor. At the perimeter of the foundation wall, multiple cracks were visible. The cracks appear to be shrinkage cracks.

The floor is a concrete, slab-on-ground and pitched to a trench drain located at the middle of the building. The trench drain is covered with steel-painted grating with an embedded steel angle supporting the grating. The grating and the embedded steel angle are showing signs of corrosion (refer to Structural Photo S2). In addition, the concrete is cracking/spalling at the edge of the trench drains at multiple locations (refer to Structural Photo S3). There are also shallow troughs cut into the slab in the apparatus bay that terminate at the trench drain. The troughs appear to aid in the drainage of excess water (refer to Structural Photo S4).

At the front of the original building, the wall is clad with a brick façade. The brick is supported by steel angle lintels over the door openings and the steel lintels are showing signs of corrosion (refer to Structural Photo S5). In addition, the overhead

door sills have embedded steel angles at the edge of the concrete at the door openings. The embedded steel angles are also showing signs of corrosion (refer to Structural Photo S6).

In the original building, there is a storage mezzanine above the ceiling of the bathrooms and kitchen areas. There is a sign on the wall below the mezzanine noting the capacity of the mezzanine of 10 pounds per square foot (refer to Structural Photo S7).

### 3.2.2 Fire Station Addition

The fire station addition consists of a single-story building, attached to the original fire station, with a gable roof framed with pre-engineered metal plate-connected wood trusses at approximately 2-feet on-center. The addition roof is higher than the adjacent original building. The roof sheathing is plywood roof sheathing, and the wall sheathing is plywood wall sheathing. The foundation walls are 8-inch reinforced concrete foundation walls with a 2-foot by 1-foot-thick reinforced concrete wall footing. The north and west foundation walls extend approximately 2-feet above the finished floor. At the front of the building, where the overhead doors are located, the top of the foundation wall is the elevation of the finished floor. At the perimeter of the foundation wall, multiple cracks were visible. The cracks appear to be shrinkage cracks.

The floor is a reinforced concrete slab-on-ground.

### 3.2.3 Museum

The museum building has no original drawings available. A site visit was conducted on March 20, 2024.

The museum building is a single-story building with a gable roof framed with a combination of wood trusses with wood gusset plates and 2x rafter framing at approximately 2-feet on-center (refer to Structural Photo S8). Roof sheathing is 1x

wood boards perpendicular to the roof framing. The exterior wall framing is 2x6 wood studs at approximately 2-feet on-center. The north portion of the building is built with two courses of CMU between the foundation and the bottom of the stud wall. On the east and west walls, cracks were noted in the CMU (refer to Structural Photo 9). In addition to the CMU cracks, on the east wall, the top of the 2x stud bearing wall is bowing out (refer to Structural Photo 10). Most of the foundation is not visible, so the extent of the foundation system below grade is unknown. At the visible portion of the perimeter of the foundation wall, cracks and spalls were visible. The cracks do not appear to be structural.

The floor is a concrete slab-on-ground. Some cracking was noted in the floor slab.

### 3.3 Architectural

#### 3.3.1 General

Field investigations of the fire station and museum were conducted on March 20, 2024 to visually review and assess the overall condition of the building and finish systems. Existing construction plans (issued May 2012 by The Maine Group) and wood truss shop drawing (issued April 2012 by Mitek) for the 2012 addition were available and used to compare with as-built conditions. No design drawings for the original building were available for review.

#### 3.3.2 Exterior Envelope

The existing fire station consists of an original structure with six vehicle bays and a single door main entrance. An addition was constructed on the west side of the building with two smaller vehicle bays. The original south elevation has red brick veneer on wood framing and plywood sheathing, with six overhead sectional doors (refer to Architectural Photos A1 and A2 in Appendix A). The brick veneer is damaged at the southeast

corner (refer to Architectural Photo A3). The existing fire station north, east, and west exterior walls consist of wood framing, batt insulation, plywood sheathing, and white vinyl siding (refer to Architectural Photos A4, A5, and A6). The vinyl siding is damaged at the corner trim at the northeast corner and at the east façade (refer to Architectural Photos A7 and A8). There appears to be a thin layer of rigid insulation behind the vinyl siding which is falling out (refer to Architectural Photo A9). The sectional doors have small oval vision windows, and the jamb tracks are severely rusted at the floor (refer to Architectural Photo A10). There is a single swinging man door on the south façade (refer to Architectural Photo A11). The building code requires a minimum of two means of egress from the apparatus bays and the office core. There are fixed and sliding windows on the east and west elevations. The original north and east walls have a two-foot high concrete knee wall with an exposed finish. The north and west walls of the addition have a two-foot high concrete knee wall with a fiberglass reinforced cementitious coating finish.

The gabled roof on both the original fire station and the addition is a ribbed metal sheeting with a brown paint finish. The roof on the addition is raised approximately 18 inches higher than the original structure. There are four large solar panel arrays covering most of the south side of the roof. There is a vinyl soffit at the roof overhang perimeter, and the soffit at the south side is damaged (refer to Architectural Photo A12).

#### 3.3.3 Interior Spaces/Finishes

The original fire station has six vehicle bays, an office space, a day room, a small kitchen (refer to Architectural Photo A13), a utility room, and two small bathrooms. The bathrooms are not ADA-compliant for handicapped access. The Fire Chief noted that the kitchen is too small to meet the current staff needs. There are no dedicated

sleeping rooms, typically three firefighters sleep on cots in the day room. There is a storage mezzanine over the bathrooms and kitchen open to the apparatus bays (refer to Architectural Photo A14). The wall separating the apparatus bays and the office/dayroom core are non-fire-rated gypsum board on wood studs with non-fire-rated swinging glass doors and interior windows (refer to Architectural Photo A15). A fire-rated separation wall is required between the office core and the apparatus bays on both sides. The floor in the apparatus bays is a concrete slab. There have been 8-inch wide drainage trenches (refer to Architectural Photo A16), approximately one inch deep, cut to help direct water to a trench drain running east west up the middle of the bays. The trenches were cut after construction of the building and are a tripping hazard. The walls and ceiling in the original building are painted gypsum board. The addition has two vehicle bays with narrower sectional doors. The walls and ceiling in the addition have a painted metal liner panel (refer to Architectural Photo A17).

### 3.4 Mechanical

#### 3.4.1 Fire Station

The existing fire station is heated by an oil-fired boiler in the mechanical room. Heating water is circulated to four heating zones by in-line circulator pumps. Each heating zone is equipped with ceiling-hung unit heaters. There is a Taco Zone controller mounted on the side of the boiler that controls the circulator pumps. The fuel oil tank is also located in the mechanical room. All the heating equipment is in fair condition and appears to be working.

The vehicle bays were equipped with a vehicle exhaust system at one, but that system is no longer operable and has been abandoned in place. There is no ventilation system in the building.

Domestic hot water for the toilet rooms and kitchen is produced by an electric water heater. Plumbing fixtures are in fair condition and appear to be in proper working condition.

### 3.5 Electrical

#### 3.5.1 Power

Power to the building is fed overhead from a utility owned, pole mounted transformer located West of the building. Secondary conductors to travel overhead from the transformer to a weather head attached to the building and down the side of the building to a utility owned meter. The meter then feeds a main service disconnect switch which feeds an automatic transfer switch (refer to Electrical Photo E1). Electrical Service Entrance. The automatic transfer switch feeds a main panelboard located in the western most garage bay. This panelboard feeds HVAC, lighting, overhead doors, and receptacles as well as branch panelboards in other parts of the building.

The building is also supplied by a Generac generator located to the west of the building to provide power during a utility power outage (refer to Electrical Photo E2). The generator appears to feed the entire building and also appears to be a backup generator and not an emergency generator.

Roof mounted photovoltaic arrays are installed on the building (refer to Electrical Photo E3). The five arrays feed the associated inverters and combiner box located on the rear of the building (refer to Electrical Photo E4). The system feeds the main distribution system of the building.

The building appears to have the quantity of receptacles required for operations. Wiring in the building is a mixture of conductors in conduit, MC Cable, and NM wire.

### 3.5.2 Lighting

Lighting in the building is typically fluorescent fixtures. Most of the building contains surface 1x4 wrap type fixtures a surface mount four-foot utility type fixtures. (refer to Electrical Photo E5). Lighting control is realized by local switches only; no occupancy sensors were noted. Exterior lighting for apparatus bays and personnel doors consists of wall mounted, LED type fixtures.

### 3.5.3 Communications

The communications service travels overhead from the utility pole west of the building to the west side of the building. The demarcation box is located on the west side. The service then enters the building. The building contains telephone and network services. The quantity of network jacks appears to be adequate for the buildings use. A roof mounted antenna is utilized for the dispatch system (refer to Electrical Photo E6).

### 3.5.4 Electronic Security Systems

The building contains a CCTV system which consists of cameras, monitors and recording equipment. The cameras are located in the apparatus bays, offices, and building exterior for what appears to be complete coverage of the building (refer to Electrical Photo E7).

### 3.5.5 Fire Alarm

The building appears to contain local smoke and CO detection only.

## 4. RECOMMENDATIONS

### 4.1 Civil

The proposed site improvements consist of removal of the existing Fire Station and Museum Buildings and pavements and constructing a new Fire/Rescue Station and a Police Station. The new design utilizes the existing developed area without any expansion due to the presence of wetlands and streams on three of the four sides of the site. A 20-foot area between the top of the fill back and the proposed improvements has been retained to allow the buildings/parking to be constructed and maintained without encroaching on the wetlands or stream setbacks.

The Fire/Rescue and the Police will be in a common building with the Fire/Rescue located nearest to Main Street and the Police and majority of the vehicle parking will be located on the northern portion of the site. The proposed plan includes maneuvering area for fire apparatus to enter the garage bays from the north and direct access to Main Street from the garage bays.

Domestic and Fire Protection water will be provided by a connection to the public water system. Sanitary sewer service will also be provided by a connection to the public sewer system. Electric and communication services will be connected to the overhead lines on the south side of Main Street. It is anticipated that stormwater will be required to provide treatment for quantity and quality which can be accommodated on the site by use of a combination of surface and subsurface systems that will discharge to the nearby wetlands and stream.

The property is in the RES-2 zoning district and Municipal uses are allowed, but must be deemed necessary by the City Council. Prior to the City Council taking such action thereon, the council

shall hold a public hearing for which 10 days' notice shall be given. Since the project area is less than three acres and the impervious area of the development will be less than 3-acres, this project will require Municipal Site Plan review for a minor development by the Code Officer.

A Maine DEP Stormwater Permit will likely be required because over one acre will be disturbed and it is anticipated more than one acre of impervious surface will be created. Because the redeveloped site and the Cemetery are owned in common by the city, if new impervious areas that have been or will be created after 1975 (when the Site Location of Development Act (SLODA) was adopted) a SLODA Permit may be necessary. A history of the existing Fire Station and Cemetery development will be needed to evaluate the need for the SLODA Permit. A Maine DEP NRPA permit will likely be required for this project because soil disturbance within 75-feet of the stream will be necessary. The Maine DOT Traffic Movement Permit will be required if the site generates more than 100 trips during the peak hour. A trip generation analysis will be needed to determine if a Traffic Movement Permit will be required.

Because this site is apparently a previously filled site and has been used as a snow dump, Geotechnical and Environmental investigations are needed for the final design.

### 4.2 Structural

#### 4.2.1 Fire Station

Following current codes, fire stations are required to be designed as an essential facility. The original building did not have original drawings, so the initial design loads were not available for review. Based on the age of the building, it is assumed that the original fire station building was not designed as an essential facility and would not meet current codes. No design calculations were performed as part of this review, but if the

building were analyzed, it is assumed that upgrades would most likely be required to bring the building up to current codes as an essential facility. Upgrades could include, but not be limited to, roof reinforcing and wall reinforcing. In addition, the following additional items noted during the site visit would require additional review and modifications:

- Steel lintel corrosion at brick openings.
- Embedded steel angle sill corrosion at overhead doors.
- Steel corrosion at interior trench drain.
- Concrete damage at interior trench drain.

#### 4.2.2 Fire Station Addition

The 2012 fire station addition original drawings were available for review, and the design loads indicate that the addition was designed as an essential facility. No design calculations were performed as part of this review, but further review would be required to verify that the existing building meets current code requirements.

#### 4.2.3 Museum

The museum building did not have original drawings, so the initial design loads were not available for review. The museum would not be required to be an essential facility. No design calculations were performed as part of this review, but if the building were analyzed, it is assumed that upgrades would most likely be required to bring the building up to current codes. Upgrades could include, but not be limited to, roof reinforcing and wall reinforcing. In addition, the following additional items noted during the site visit would require additional review and modifications:

- CMU cracking at masonry courses at bottom of exterior wall.
- East wall bowing at top of bearing wall.

It was decided that the existing fire museum would be demolished and a new 2,000 sf fire museum will be constructed as part of the new facility.

### 4.3 Architectural

The poor condition of the existing building and existing code deficiencies, in combination with the limited buildable space on the site, leads us to recommend demolition of both the fire station and the fire station museum. A new public safety facility will allow the combination of a new fire station and police station with fire truck apparatus bays and on-site parking.

It would be possible to renovate the existing fire station and add an addition behind it if the police station is located at another site, but the cost of addressing the structural code issues, the floor slab drainage issues, and the envelope/thermal performance issues would likely result in an expensive but inferior solution. It was decided that the existing fire station and fire station museum would be demolished and a new fire/EMS/police/fire museum facility be constructed. Drive through fire apparatus bays were considered but declined due to limited site area.

### 4.4 Mechanical

Recommendations for upgrades to the existing building include:

- Installation of a ventilation system to provide outside air to the facility in accordance with current building codes. The ventilation system would include an energy recovery ventilation unit with a tempering coil, and distribution ductwork to provide proper ventilation rates to the various spaces.
- Installation of heat pumps to provide energy-efficient heating and cooling.

- Installation of a vehicle exhaust system to allow operation of rescue vehicle inside the building.
- Installation of a hybrid (heat pump) domestic water heater.

If a new facility is constructed a geothermal or air-source heat pump system is recommended. The building would be equipped with either a geothermal water-to-water heat pump systems or an air-to-water heat pump system, which would produce heating and cooling water that can be circulated throughout the facility and to air handling units and terminal equipment. This type of system is highly efficient and flexible. Energy recovery ventilators would provide code required outside air throughout the facility. Radiant heated slabs in the apparatus bays would provide heat. Radiant heated floor slabs could also be installed in the offices and personnel areas along with fan-coil units for cooling. Energy use reduction would be controlled and monitored by a Direct Digital Control (DDC) system that could be monitored remotely if desired.

## 4.5 Electrical

### 4.5.1 Power

Power to the building will be fed from the existing overhead lines owned by the local utility. A three-phase transformer with a 120/208V secondary will be provided. The service will enter the building in the main electrical room and feed an MDP (main distribution panelboard) which will also be fed from an ATS (automatic transfer switch) connected to a whole building generator. The MDP will receive an electric meter to monitor the building's electricity usage. The building's metering system will be able to monitor different loads such as mechanical, lighting, and receptacle loads. The MDP will also have a surge protective device. AFCI circuit breakers will be provided for sleeping rooms and other spaces as required by the NEC.

The generator will feed the whole building and will have separate branches for normal power and life safety loads. The system will be designed according to Chapter 7 of the NEC (National Electric Code). Sound attenuation will be provided considering the close proximity to sleeping quarters.

The main electrical room will contain a main 120/208V panelboard as well as 120/208V branch circuit panelboards as needed. Branch circuit wiring within the building will be copper conductors in conduit. 120V receptacles will be provided as required.

A preliminary lightning protection risk assessment has been performed in accordance with NFPA 780. The risk assessment indicates that this building is recommended to be protected by a lightning protection system. The system will consist of air terminals on the roof, concealed down conductors, and ground rods. The system will be connected to the building's normal grounding electrode system. The system will be UL Master Label certified.

### 4.5.2 Lighting

High efficiency LED light fixtures will be provided inside building. Lighting controls will include occupancy/vacancy sensors, low voltage switches, and photocell daylight harvesting where required by energy codes. Local switching will be provided in spaces such as electrical rooms, mechanical rooms, IT rooms and other utility type spaces where it could be a hazard if the lights were to automatically turn off. Exit signs will be clear acrylic in finished spaces and white thermoplastic in utilitarian type spaces. Emergency lighting will be provided as emergency batteries integral to normal light fixtures.

Exterior building mounted light fixtures will be LED, full cutoff with no light emitted above the horizontal plane. Fixtures will be controlled by photocell and timeclock. LED fixtures mounted on poles will also be provided for parking lots and will be controlled with photocells and timeclocks.

#### 4.5.3 Communications and Technology

Communications cables will enter the building and terminate in an IT room. The IT room will contain 3/4-inch fire retardant plywood on the walls, floor mounted equipment racks, ladder tray above the racks and a TMGB (telecommunication main grounding bus).

Cat6 horizontal cabling will originate from the communications racks and feed communications outlets throughout the building.

A firefighter alert system will be provided in accordance with NFPA 403 and NFPA 1221. The system will provide audible announcements, ramped heart saver tones, and dedicated red light fixture to wake the responding personnel. These methods will happen no greater than five seconds from system initiation. The system will also include light and audible control inside and outside, digital light status bar, digital resource display board, rip and run printers etc. These pieces of the system will be tailored to how this station will function.

A PA system consisting of speakers, and speakers with a visual element will be provided. This system will be tied into the fire fighter alert system.

A CATV system or internal video system will be provided.

Infrastructure such as power, conduit, and boxes will be provided as required for the dispatch system.

#### 4.5.4 Electronic Security Systems

Infrastructure for a CCTV system will be provided. The system will consist of conduit, pathways, boxes to support the installation of cameras, monitors, power supplies, and recording equipment. The cameras will be located in vehicle bays, the main entrance, and apparatus bays. Monitors will be located at the watch desk or dispatch.

#### 4.5.4 Fire Alarm System

A fire alarm system will be provided for the building. The system will consist of a fire alarm control panel, manual pull stations, speaker/strobes, and smoke detectors. The system will also include tamper and flow switches if the building is required to have a sprinkler system. The system be will designed according to NFPA 101 and NFPA 72.



STRUCTURAL



Structural Photo S1 – Fire Station, Roof Framing and Plywood Roof Sheathing



Structural Photo S2 – Fire Station, Trench Drain Grating Corrosion



Structural Photo S3 – Fire Station, Trench Drain Concrete Damage



Structural Photo S4 – Fire Station, Troughs Ground Into Concrete



Structural Photo S5 – Fire Station, Door Lintel Corrosion



Structural Photo S6 – Fire Station, Overhead Door Sill Corrosion



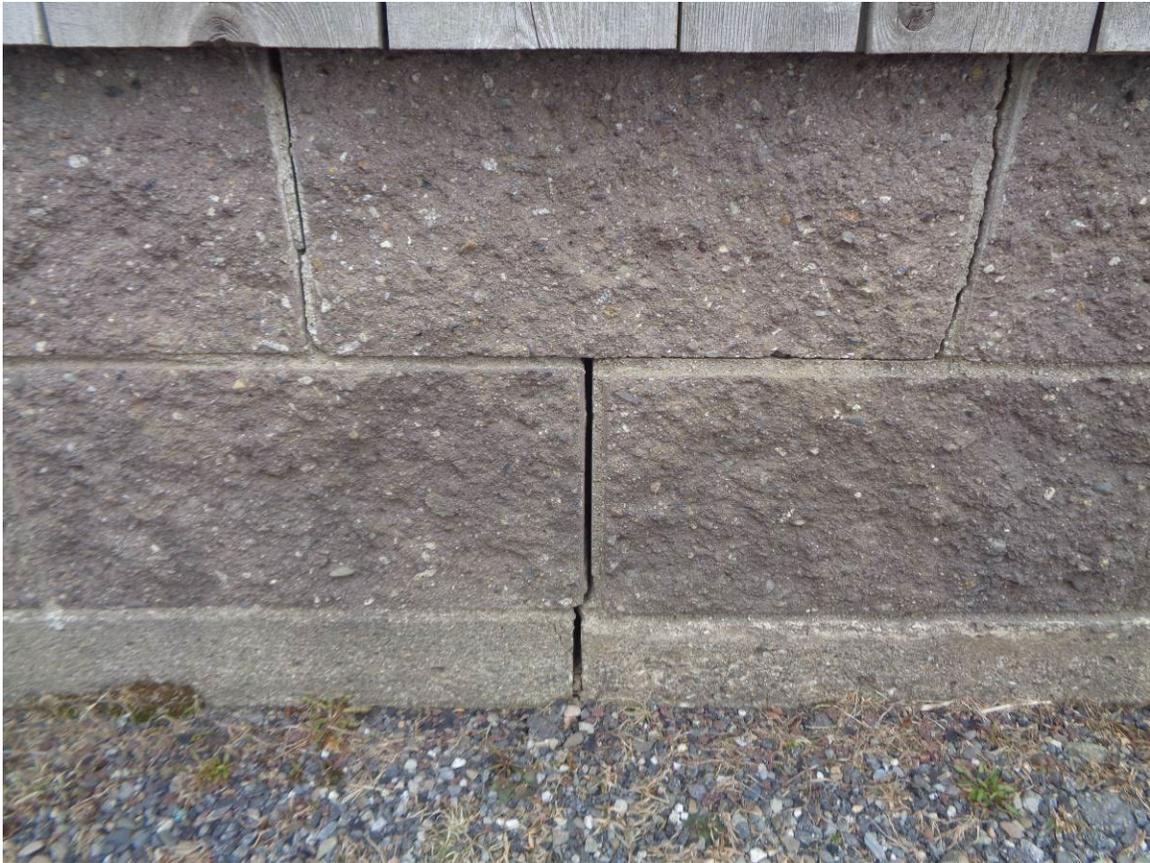
Structural Photo S7 – Fire Station, Mezzanine



Structural Photo S8 – Museum, Roof Framing



Structural Photo S9 – Museum, Exterior Wall Bow



Structural Photo S10 – Museum, CMU Crack

ARCHITECTURAL



Architectural Photo A1 – South Side Street Elevation



Architectural Photo A2 – 2-Bay Addition



Architectural Photo A3 – Brick Veneer Damage



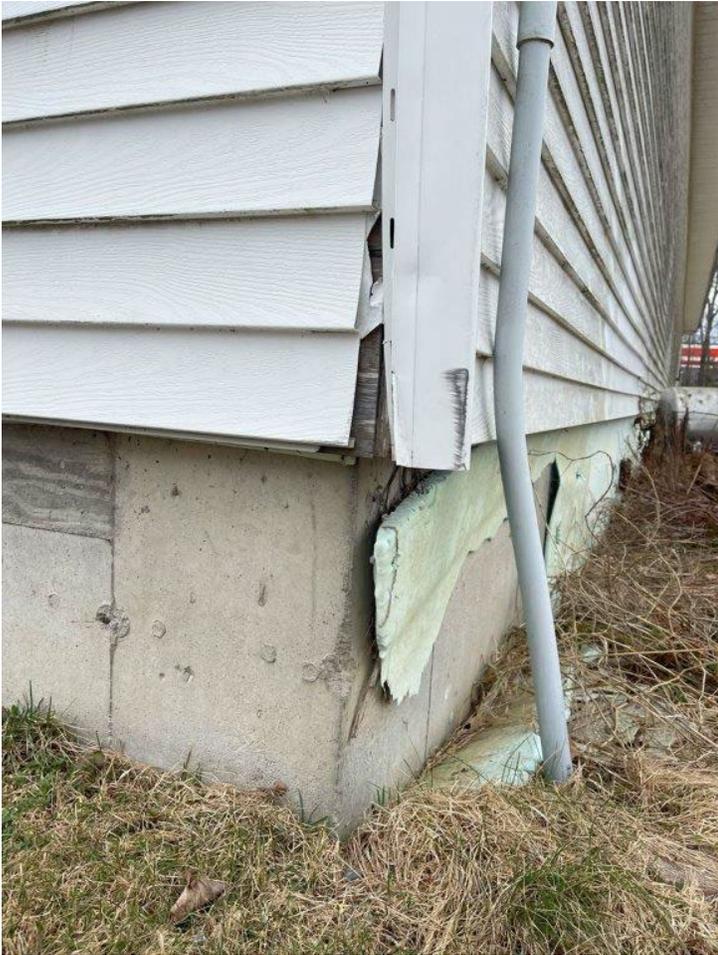
Architectural Photo A4 – East End Elevation



Architectural Photo A5 – North Elevation



Architectural Photo A6 – West Elevation



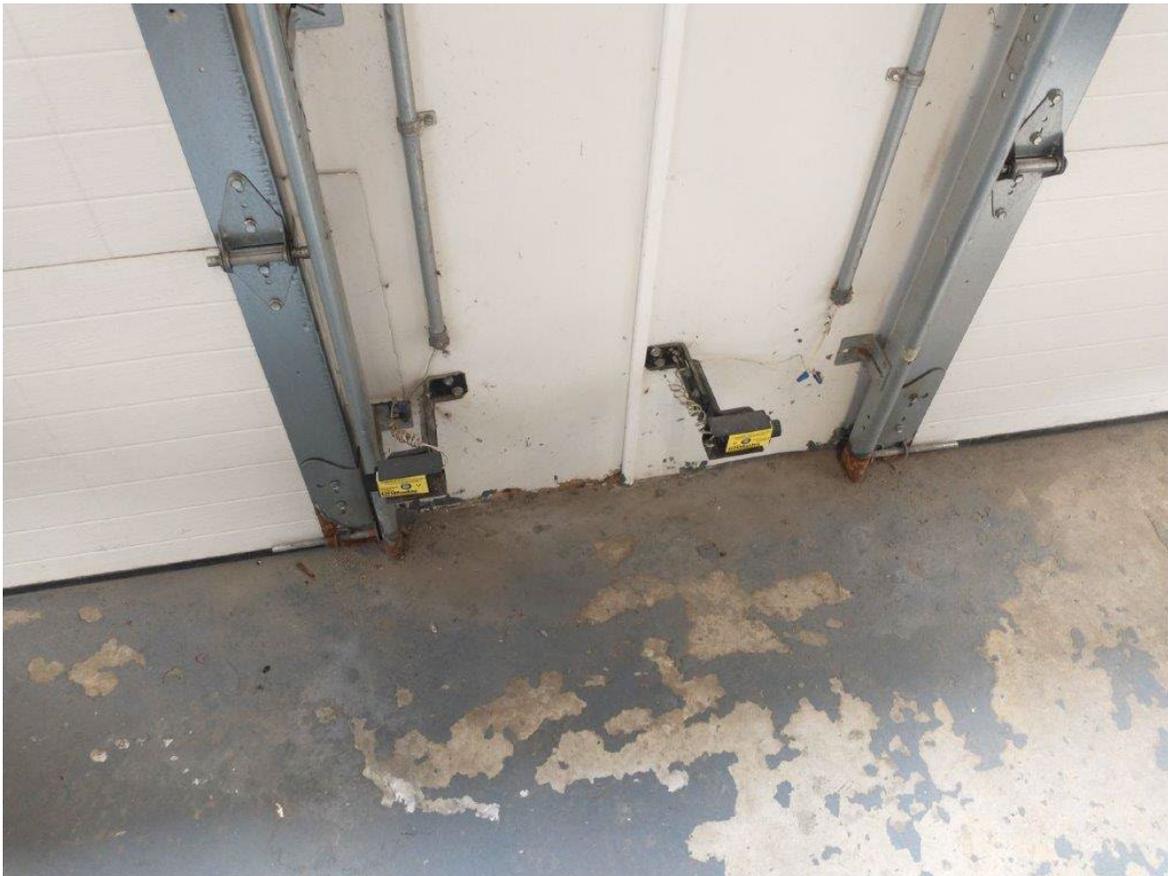
Architectural Photo A7 – Exterior Wall Insulation Damage



Architectural Photo A8 – Exterior Wall Siding Damage



Architectural Photo A9 – Exterior Wall Insulation Damage



Architectural Photo A10 – Sectional Door Track Corrosion



Architectural Photo A11 – Non-Compliant Single Means of Egress



Architectural Photo A12 – Exterior Soffit Damage



Architectural Photo A13 – Kitchen



Architectural Photo A14 – Storage Mezzanine



Architectural Photo A15 – Non-Rated Separation at Apparatus Bay



Architectural Photo A16 – Floor Drainage Trench



Architectural Photo A17 – Non-Rated Separation at Apparatus Bay Addition

ELECTRICAL



Electrical Photo E1 – Electrical Service Entrance



Electrical Photo E2 – Generator



Electrical Photo E3 – PV System



Electrical Photo E4 – PV Inverters



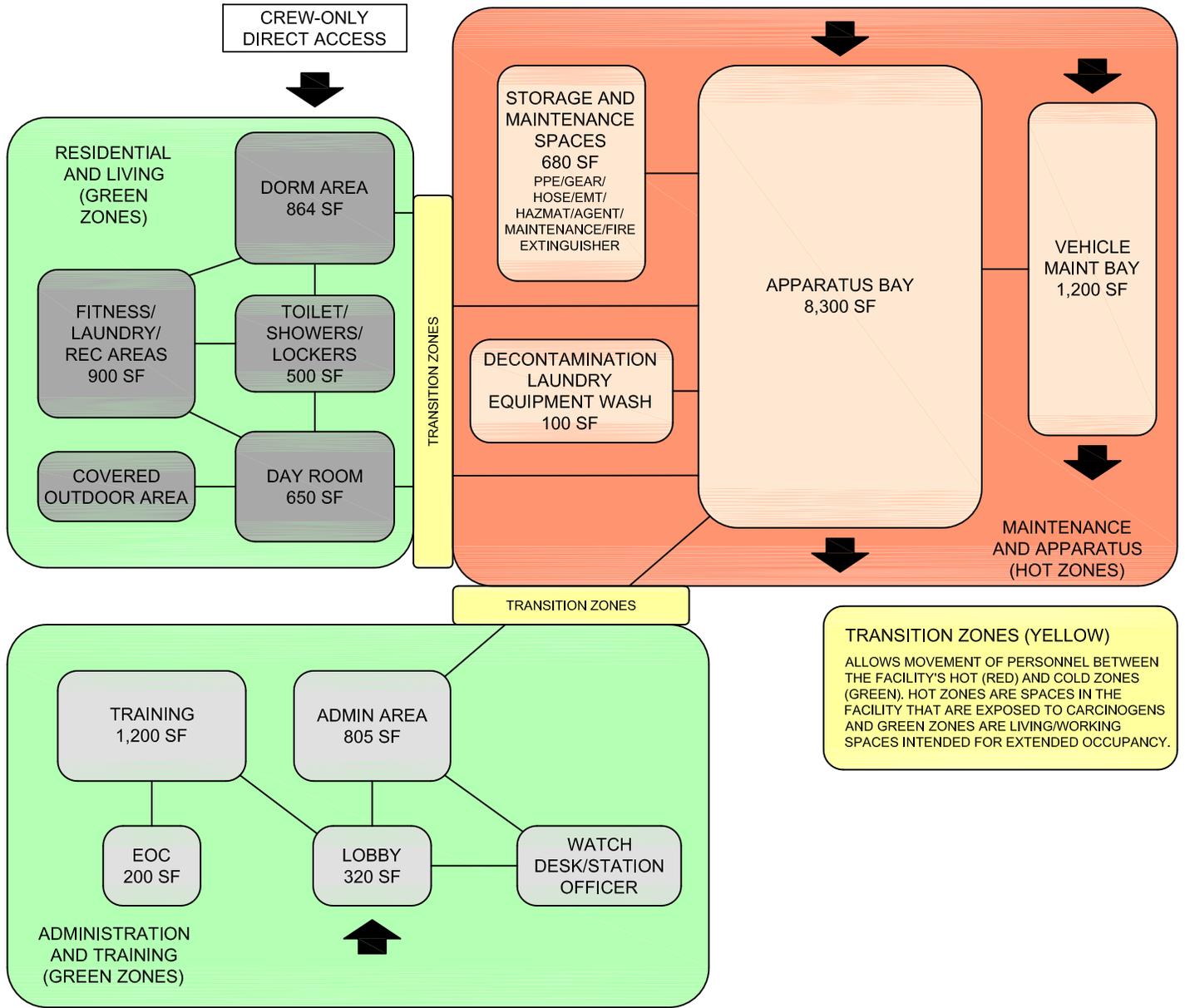
Electrical Photo E5 – Typical Light Fixtures



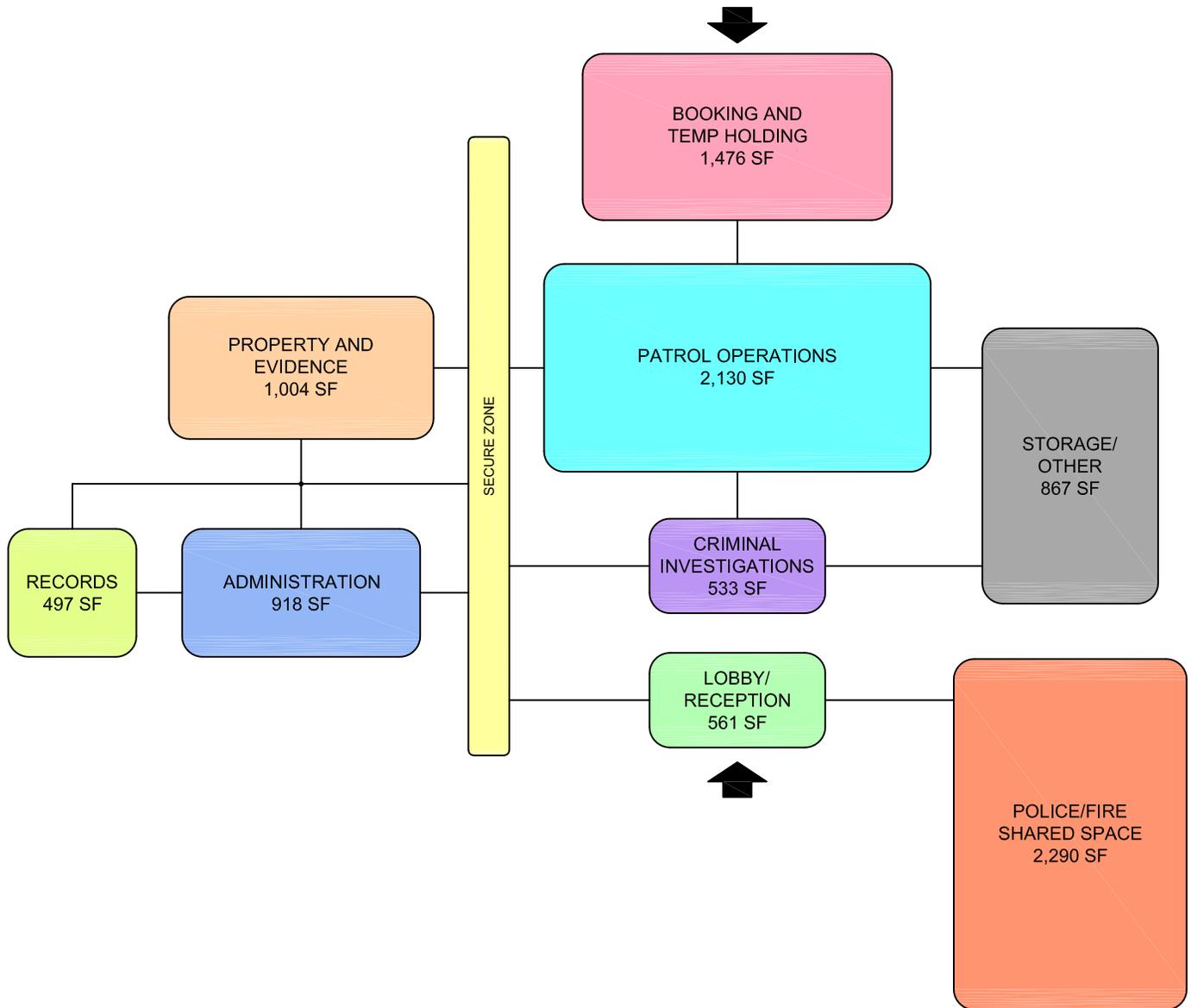
Electrical Photo E6 – Antenna



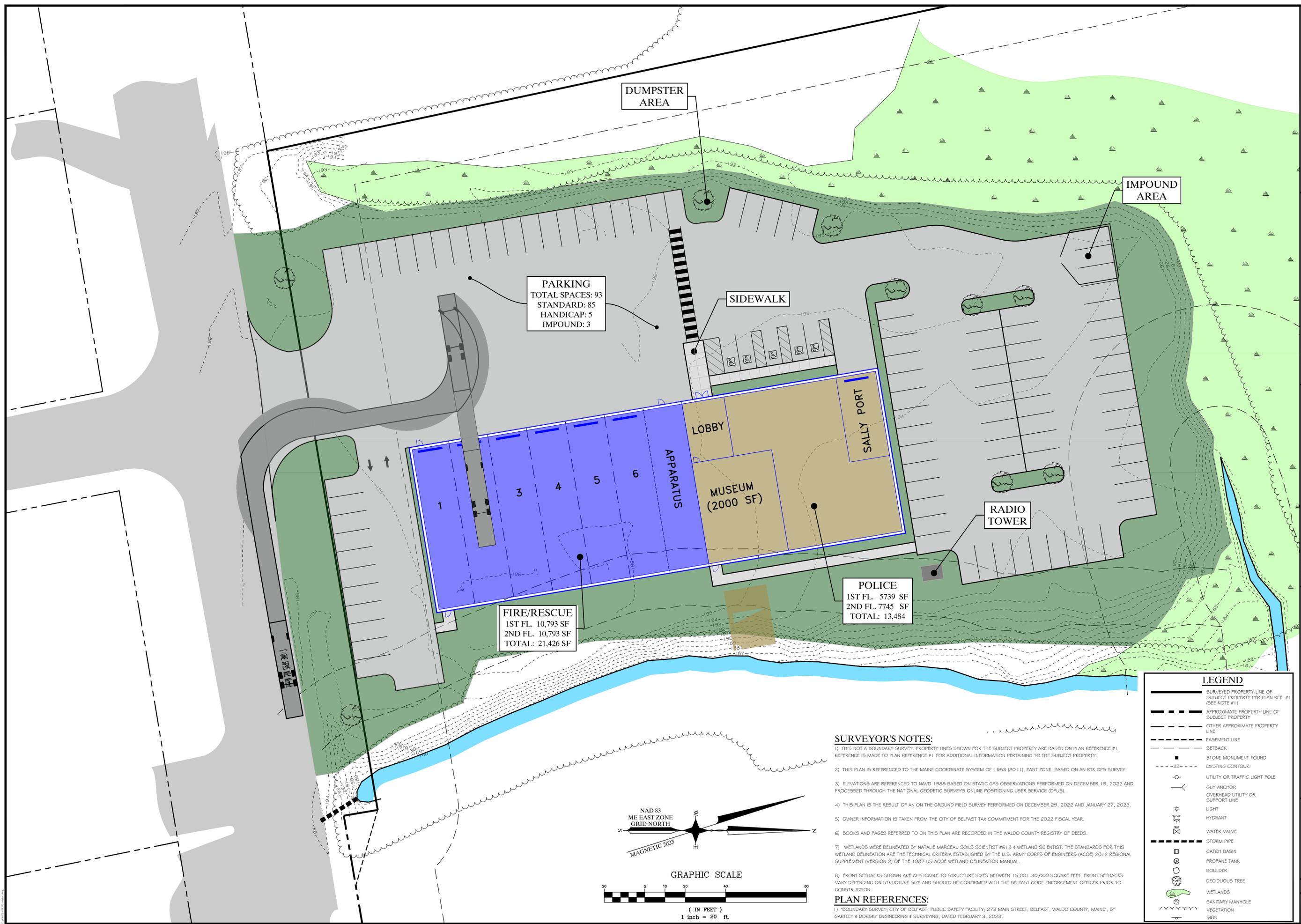
# FIRE STATION BASIC FACILITY RELATIONSHIP DIAGRAM



# POLICE STATION BASIC FACILITY RELATIONSHIP DIAGRAM







**PARKING**  
 TOTAL SPACES: 93  
 STANDARD: 85  
 HANDICAP: 5  
 IMPOUND: 3

**FIRE/RESCUE**  
 1ST FL. 10,793 SF  
 2ND FL. 10,793 SF  
 TOTAL: 21,426 SF

**POLICE**  
 1ST FL. 5739 SF  
 2ND FL. 7745 SF  
 TOTAL: 13,484

**MUSEUM (2000 SF)**

**APPARATUS**

**LOBBY**

**SALLY PORT**

**RADIO TOWER**

**DUMPSTER AREA**

**IMPOUND AREA**

**SIDEWALK**

**LEGEND**

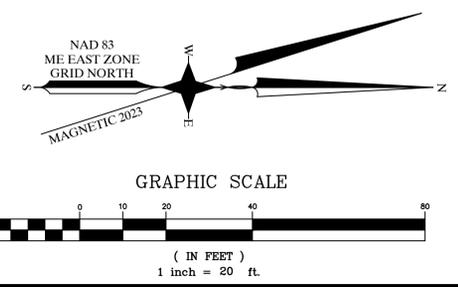
- SURVEYED PROPERTY LINE OF SUBJECT PROPERTY PER PLAN REF. #1 (SEE NOTE #1)
- APPROXIMATE PROPERTY LINE OF SUBJECT PROPERTY
- OTHER APPROXIMATE PROPERTY LINE
- EASEMENT LINE
- SETBACK
- STONE MONUMENT FOUND
- EXISTING CONTOUR
- UTILITY OR TRAFFIC LIGHT POLE
- GUY ANCHOR
- OVERHEAD UTILITY OR SUPPORT LINE
- LIGHT
- HYDRANT
- WATER VALVE
- STORM PIPE
- CATCH BASIN
- PROPANE TANK
- BOULDER
- DECIDUOUS TREE
- WETLANDS
- VEGETATION
- SANITARY MANHOLE
- SIGN

**SURVEYOR'S NOTES:**

- 1) THIS NOT A BOUNDARY SURVEY. PROPERTY LINES SHOWN FOR THE SUBJECT PROPERTY ARE BASED ON PLAN REFERENCE #1. REFERENCE IS MADE TO PLAN REFERENCE #1 FOR ADDITIONAL INFORMATION PERTAINING TO THE SUBJECT PROPERTY.
- 2) THIS PLAN IS REFERENCED TO THE MAINE COORDINATE SYSTEM OF 1983 (2011), EAST ZONE, BASED ON AN RTK GPS SURVEY.
- 3) ELEVATIONS ARE REFERENCED TO NAVD 1988 BASED ON STATIC GPS OBSERVATIONS PERFORMED ON DECEMBER 19, 2022 AND PROCESSED THROUGH THE NATIONAL GEODETIC SURVEYS ONLINE POSITIONING USER SERVICE (OPUS).
- 4) THIS PLAN IS THE RESULT OF AN ON THE GROUND FIELD SURVEY PERFORMED ON DECEMBER 29, 2022 AND JANUARY 27, 2023.
- 5) OWNER INFORMATION IS TAKEN FROM THE CITY OF BELFAST TAX COMMITMENT FOR THE 2022 FISCAL YEAR.
- 6) BOOKS AND PAGES REFERRED TO ON THIS PLAN ARE RECORDED IN THE WALDO COUNTY REGISTRY OF DEEDS.
- 7) WETLANDS WERE DELINEATED BY NATALIE MARCEAU SOILS SCIENTIST #6134 WETLAND SCIENTIST. THE STANDARDS FOR THIS WETLAND DELINEATION ARE THE TECHNICAL CRITERIA ESTABLISHED BY THE U.S. ARMY CORPS OF ENGINEERS (ACOE) 2012 REGIONAL SUPPLEMENT (VERSION 2) OF THE 1987 US ACOE WETLAND DELINEATION MANUAL.
- 8) FRONT SETBACKS SHOWN ARE APPLICABLE TO STRUCTURE SIZES BETWEEN 15,001-30,000 SQUARE FEET. FRONT SETBACKS VARY DEPENDING ON STRUCTURE SIZE AND SHOULD BE CONFIRMED WITH THE BELFAST CODE ENFORCEMENT OFFICER PRIOR TO CONSTRUCTION.

**PLAN REFERENCES:**

- 1) "BOUNDARY SURVEY; CITY OF BELFAST; PUBLIC SAFETY FACILITY; 273 MAIN STREET, BELFAST, WALDO COUNTY, MAINE", BY GARTLEY & DORSKY ENGINEERING & SURVEYING, DATED FEBRUARY 3, 2023.



AUTOZONE, INC.  
BOOK 1994, PAGE 230  
TAX MAP 5, LOT 16

CONCRETE PARKING AREA

WOODED

WOODED

CITY OF BELFAST  
BOOK 223, PAGE 2  
TAX MAP 12, LOT 50  
ROUTE 3 COMMERCIAL  
LAND USE DISTRICT

NON-WOODED

STREAM AS DEFINED UNDER THE MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION'S  
NATURAL RESOURCES PROTECTION ACT

STREAM AS DEFINED UNDER THE MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION'S  
NATURAL RESOURCES PROTECTION ACT

WOODED

NON-WOODED

STARRETT  
DRIVE  
(PAVED, PUBLIC)

MAIN STREET  
(A.K.A. BELMONT AVENUE)  
(PAVED, PUBLIC)

GRAVEL PARKING AREA

YELLOW PARKING STRIPE (TYP.)

WHITE PARKING STRIPE (TYP.)

PAVED

FLAGPOLE

MULCHED AREA

STONE RIP-RAP

CONCRETE SLAB  
W/ GENERATOR

CONCRETE SLAB  
W/ PROPANE TANK

RR TIE RETAINING WALL

SNOW DISPOSAL AREA  
(CONTOURS APPROXIMATE)

STREAM



**Belfast Fire and Police Facility**

**Test Fit Plan**

Last Updated: March 5, 2025



<b>Program Workbook - Fire Station</b>			
<b>Room Name</b>	<b>Floor *</b>	<b>Net SF Area</b>	<b>A/E Design Notes</b>
<b>Training and Shared Space</b>			
Lobby/Vestibule	1	200	Shared with police possible.
Reception	1	120	Pass through tray, speaker, ballistic glass.
Conference/Training	2	1,200	60-80 occupants, divisible into two rooms, IT both sides.
Emergency Operations Center (EOC) & Dispatch	2	200	Counter with window
<b>Training and Shared Space Net SF Subtotal:</b>		<b>1,720</b>	
<b>Administration</b>			
Chief Office	2	200	The administrative portion of the building will have secure and controlled access.
Deputy Chief Office	2	145	
Assistant EMS Chief Office	2	145	
Shift Officer Office	2	145	
EMS on Duty Office	2	170	
Inspections Office	2	200	
Local EMA Director	2	100	
<b>Administration Net SF Subtotal:</b>		<b>805</b>	
<b>Day Room and Residential Area</b>			
Dorm Rooms (6 + 2 future)	2	864	8 single bed configuration rooms at 108 sf each.
Day Room/Kitchen/Dining	2	650	
Mens Restroom	2	120	3 WC's+2 urinals
Mens Locker Room	2	120	2 showers
Womens Restroom	2	120	3 WC's
Womens Locker Room	2	120	2 showers
Laundry Room	2	80	Residential washer and dryer
Vending Area	2	40	
Recreation Room	2	360	Optional, not requested
Fitness Room	2	437	
<b>Day Room and Residential Area Net SF Subtotal:</b>		<b>2,911</b>	
<b>Supply Storage/Other</b>			
Emergency Medical Services (EMS) Supply Storage	2	200	
Fire Equipment Storage	2	200	
Fire Service Laundry Room	2	100	Fire service specifications gear washer and dryer
Fire Hose Storage	1	100	

Room Name	Floor *	Net SF Area	A/E Design Notes
Crew Gear Storage	1	80	
Mechanical Room	2	0	SF included in net to gross multiplier
Electrical Room	2	0	SF included in net to gross multiplier
IT/Telecomm Room	2	0	SF included in net to gross multiplier
Sprinkler Room	1	0	SF included in net to gross multiplier
<b>Supply Storage Net SF Subtotal:</b>		<b>680</b>	
<b>Apparatus Room Spaces</b>			
Engine/Pumpers (2- 31' long each)	1	1,200	
Pumper/Tankers (2 - 35' long each)	1	1,200	
Ladder/Tower (1-48' long)	1	1,200	
Heavy Rescue (1-35'long)	1	1,200	
Utility/Brush Truck (1- 25' long)	1	600	
Ambulances (3+4 future - 25' long)	1	2,400	
Decontamination Bay	1	0	Incorporated in an apparatus bay above for Pumper Tanker
Work Bench	1	120	
ATV/Snowmobile (1 each)	1	800	
Boat (1- 22' long)	1	800	
<b>Apparatus Room Spaces Net SF Subtotal:</b>		<b>9,520</b>	
<b>Net SF Total:</b>		<b>15,636</b>	
<b>Net to Gross Multiplier 1.35:</b>		<b>21,109</b>	
<b>Fire Museum</b>	<b>1</b>	<b>2,000</b>	
<b>Gross SF Total:</b>		<b>23,109</b>	
<b>Other Requirements</b>			
Radio Tower for EOC Dispatch			
Cameras. Card readers, and motion sensors		150	

\* Note: final floor location of program spaces to be determined during schematic design

**Belfast Fire and Police Facility**

**Test Fit Plan**

Last Updated: March 5, 2025



<b>Program Workbook - Police Station</b>			
<b>Room Name</b>	<b>Floor *</b>	<b>Net SF Area</b>	<b>A/E Design Notes</b>
<b>Lobby/Reception</b>			
Lobby	1	340	The building will have secure and controlled access.
Lobby public restroom	1	38	
Lobby Interview room	1	63	
Reception window w/ tray, speaker (Ballistic glass/wall b	1	0	
Reception Office	1	120	
<b>Lobby/Reception Net SF Subtotal:</b>		<b>561</b>	
<b>Records</b>			
Records window w/ pass through tray, speaker (Ballistic	1	0	
Records Reception Office	1	120	
Active File Storage	1	10	
High Density Archive Storage	1	367	
<b>Records Net SF Subtotal:</b>		<b>497</b>	
<b>Administration</b>			
Chief of Police Office	2	240	
Deputy Chief's Office	2	168	
Command Staff Office (Operations and Support)	2	144	
Administrative Assistant /Amin reception area	2	200	
Conference Room	2	166	
File storage	2	30	
Supply storage	2	22	
General storage	2	40	
<b>Administration Net SF Subtotal:</b>		<b>918</b>	
<b>Patrol Operations</b>			
Patrol Supervisors Office (2 Desk)	1	288	
Squad room and roll call (work stations)	1	400	
Patrol equipment room	1	99	
Training Coordinator	2	122	
Traffic and Parking	2	122	
Community Liason	1	122	
Male Locker room w/ bathroom/ 3 showers	2	480	
Female Locker room w/ bathroom/2 showers	2	237	
Break room - with table, micro, refrigeratr and sink	2	157	

Room Name	Floor *	Net SF Area	A/E Design Notes
Bunk rooms (2)	2	100	
<b>Patrol Operations Net SF Subtotal:</b>		<b>2,127</b>	
<b>Criminal Investigations</b>			
Detective Supervisors Office	2	111	
Detectives Office (2 Desk)	2	300	
Computer Crimes Office ( 1 Desk)	2	122	
Interview room 1	2	67	
Interview room 2	2	63	
Detective Temporary Evidence Storage	2	53	
<b>Criminal Investigations SF Subtotal:</b>		<b>533</b>	
<b>Property and Evidence</b>			
Outer evidence (Evidence processing /supplies)	2	168	
Inner evidence room	2	412	
Evidence Lockers	2	12	
Refrigerated Evidence storage	2	6	
Weapons storage	2	50	
Drug Storage	2	62	
Vehicle examination bay	2	294	
<b>Property and Evidence Net SF Subtotal:</b>		<b>1,004</b>	
<b>Booking and Temporary Holding</b>			
Booking room /intox machine/live scan	1	363	
Temporary holding cells (2)	1	100	No overnight holding
Cell Vestibule	1	64	
Juvenile holding room (not secure)	1	63	
Bail	1	31	Exterior door required, hallway for prisoner release not through lobby
Intox	1	10	
Booking room toilet	1	38	
Booking room interview room	1	31	
Fingerprinting	1	10	
Sallyport 1 and 2	1	766	Totally enclosed
<b>Booking and Temporary Holding Net SF Subtotal:</b>		<b>1,476</b>	
<b>Storage/Other</b>			
Armory and ammunition storage	1	58	
Weapon Cleaning	1	40	Not in secure area.
Uniform and equipment storage	1	99	

Room Name	Floor *	Net SF Area	A/E Design Notes
Computer room (Servers, switches/video )	1	158	
Bulk evidence storage room	1	412	Room off of Sallyport, no gasoline
Vehicle maintainance storage room	1	100	Gasoline allowed
Mechanical	1	0	SF in net to gross multiplier
Electrical	1	0	SF in net to gross multiplier
IT/Server room	1	0	SF in net to gross multiplier
Sprinkler Entrance	1	0	SF in net to gross multiplier
<b>Storage Net SF Subtotal:</b>		<b>867</b>	
<b>Police Fire Shared Space</b>			
Lobby	1	0	See lobby in Lobby/Reception
Training- Community - EOC Room	1	1,113	57 seats
EOC Communications Room	1	290	Room adjacent to EOC Room
Training storage	1	99	Phones, greaseboards
Training -Community -EOC and Staff Restrooms	1	452	
Fitness Room	1	336	
<b>Police Fire Shared Space Net SF Subtotal:</b>		<b>2,290</b>	
<b>Net SF Total:</b>		<b>10,273</b>	
<b>Net to Gross Multiplier (1.3) SF Total:</b>		<b>13,355</b>	
<b>Gross SF Total:</b>		<b>13,355</b>	
<b>Exterior Requirements</b>			
Generator			
Radio Tower			Server room required
Visitor and parking in the front			
Employee only parking in the rear.			A gate is a wishlist item
Consider additional parking for meetings and trainings			
Consider overhang for patrol vehicles in the winter			
Secure impound space outside			
K9 Kennel			2 black labs
Flag Poles			Consider a brick walkway to flagpole fundraiser
*Note: Final floor location of program spaces to be determined during schematic design			

