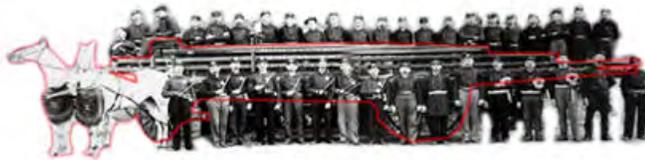


1890



1910



1965



1984



2003



SOMERVILLE EMERGENCY SERVICES
facilities analysis and master plan report 01.20.2004



Table of Contents

<i>Section</i>	<i>Tab</i>
Executive Summary	1
Existing Facilities Analyses	2
Police Department	
Hook and Ladder Company No. 1	
West End Hose Company No. 3	
Engine Company No. 1	
Lincoln Hose Company No. 4	
First Aid and Rescue Squad	
Site Design Options	3
Needs Assessment and Associated Costs	4
Space Needs	
Design Guidelines	
Adjacency Diagrams	
Cost Estimates	5

EXECUTIVE SUMMARY

Somerville Emergency Services Complex

In December of 2002, the Borough of Somerville commissioned SSP Architectural Group to perform a detailed Needs Assessment and Existing Facilities Analysis of the Borough's current emergency services facilities, and, based upon the findings of these studies, to create a Conceptual Facility Design and Master Plan for a new *Emergency Services Complex*. This report contains the findings of the team's assessments and analyses, as well as recommendations and suggestions to improve and upgrade the Borough's emergency services readiness and capabilities while continuing to encourage Somerville's 160 plus - year tradition of volunteerism.

The Master Plan itself offers a set of guidelines for a new Emergency Services Complex. As imagined, this Complex will efficiently and adequately meet the facility requirements of today's emergency service providers, whether police officers, fire fighters, or rescue squad personnel. In addition, the facility will be designed to accommodate the needs of future emergency services providers for decades to come.

The SSP team considered several complimentary and contentious issues in creating the two Master Plan options. First and foremost, due to major demographic changes in Somerville, the advent of new technologies and equipment, and the luck of geography, the Borough's emergency services personnel are currently struggling to perform at their best due to inadequate and inefficient facilities. Another factor is, as always, cost. The SSP team suggests a variety of design ideas to help reduce the Borough's expenditures in developing the new Emergency Services Complex, ranging from making existing buildings tax-ratable to retaining the Fire Department's and Rescue Squad's volunteer status. Implicit in this last goal is the desire to create a new facility that both honors and maintains the efforts of volunteers in Somerville's emergency services.

The emergency facilities studied by SSP were the Somerville Police Department, the Hook and Ladder Company No. 1, the West End Hose Company No. 3, Engine Company No. 1, the Lincoln Hose Company No. 4, and the First Aid and Rescue Squad. During the facility assessment phase, the team interviewed police, fire fighter, and rescue personnel to identify and prioritize those space needs essential to the delivery of public safety services. Key to this process was the involvement of The Smith Group, a firm nationally recognized as experts in the design of public

safety facilities. Overall, the facilities assessment and programming interviews concluded that the Borough's Emergency Services Buildings are inadequate. Specialized law enforcement spaces and areas capable of storing and maintaining modern fire fighting apparatus and rescue vehicles are either deficient or absent, and even at those facilities adequate to equipment needs, site accessibility issues were present to some degree. The most common problem was a lack of adequate space to house modern fire fighting and rescue apparatus and vehicles—the same issue that the Borough has previously addressed many times over by housing emergency services in new, larger buildings. Specific findings from each of the facilities studied are summarized below:

Police Department: The Borough police department currently operates out of a building designed as a beer distribution warehouse and built in the 1950s. Last renovated to house the police department in 1978, the facility has no conference room, no sally port for police vehicles, and no interview rooms. Several spaces common to modern police facilities are also absent. These include an area for fingerprinting and a dedicated filing and records area. In addition, the building is in gross violation of several building codes. Finally, the Borough police department has no municipal court space of its own, and must rent court space from Raritan.

Hook and Ladder Company No. 1: Originally designed to accommodate a new “Wonder” fire-fighting truck in 1896, the history of Somerville's Hook and Ladder Company is a predictable pattern of expansion and renovation of the building as the Borough purchased new fire fighting vehicles necessary to keep residents protected but too large to store. The Company is currently scheduled to receive a new truck in 2004, yet still operates out of building from 1901. Unfortunately, because of lack of space, the Company will be forced to purchase a truck that fits the building, rather than the most appropriate truck for the Borough's fire fighting needs. Another issue with the Company's site is the lack of access. In fact, during holidays and parades, the main response route for the Company is closed off entirely. And, as in the Police Department building, the facility is in violation of several building codes, and cannot be upgraded to accommodate any of the heavy equipment or new technologies necessary for modern emergency response.

West End Hose Company No. 3: Housed in a borough-owned building dedicated in 1971, the West End Hose Company's facilities are adequate to the Company's fire fighting needs. Opportunities for small, relatively low-cost improvements are present, however. These include ADA and HVAC upgrades.

Engine Company No. 1: The facilities of Engine Company No. 1 meet the Company's current needs in all respects except for size, and the building requires only small upgrades to address building operating systems deficiencies. However, on a more long-term basis, the building has inadequate operating space for fire fighting apparatus maintenance, inadequate bay dimensions for modern fire fighting equipment, and sits well within the flood plain. In this building the last truck purchased was customized to fit.

Lincoln Hose Company No. 4: Located in a building built in 1974 when the company's existing facilities proved too small to house a new fire truck, the Company's building is capable of supporting modern fire fighting apparatus. The site could be improved through the purchase of adjacent property, allowing for such measures as the addition of a second unit, second floor assembly purposes, improved accessibility, and/or emergency disaster housing.

First Aid and Rescue Squad: Unlike the Borough's other Emergency Response Services, the Borough's First Aide and Rescue Squad is an independent, non-profit operation. Despite an ever-increasing number of calls to the station (1,400 calls were made in 2002), the volunteers of the organization have proven up to the task of responding to residents' first aid needs while neighboring towns have had to contract with private providers of first aid and rescue services. Unfortunately, the Squad's building and site have reached their capacity in terms of the equipment they can hold, forcing the Squad to house some of its vehicles and equipment outdoors. Also, as in the fire fighting stations, the Squad had to purchase custom ambulances that were smaller than desired.

Compared to the Police Department, some of the Fire Department and Rescue Squad facilities already possess adequate space for internal station functions. However, all of the facilities suffer from an inability to keep pace with modern public safety equipment and vehicle space requirements. Even in those buildings currently capable of supporting emergency services, lack of space and bay size limits will likely reduce fire fighting and first aid responsiveness within a few years. In the past, these limitations have forced the Borough to forgo appropriate apparatus upgrades in favor of costly custom-built or undersized equipment, designed to fit in the available space. Inadequacies in bay length, drive-through access, gear storage, and proper handling of hoses and extinguishers all contribute to the facilities' overall inefficiency.

In addition to the Emergency Services buildings' inability to house modern equipment, most face accessibility problems as well. For example, the lack of a secondary road leading to Warren St. makes the Lincoln Hose Company's site difficult to exit. Similar shortcomings are present at Central Hook & Ladder and Engine Company No. 1. Allowing all four Fire Department facilities, a site, or sites, appropriate to the turning radii of specialized equipment and centrally located within the township, would drastically improve community safety.

In addition to building and site issues, the bisection of Somerville by Peter's Brook poses a challenge to the delivery of emergency services. While services can be reasonably provided during a flood emergency, flood damage to some of the facilities themselves can pose a significant threat to service delivery. Our conceptual designs mitigate the effects of being located in the flood plain.

Based upon this analysis, the Borough has an opportunity to break the cycle of choosing between expensive built-to-order equipment and stop-gap new emergency services buildings by constructing a new, centralized *Emergency Services Complex*. The SSP team has developed a basic building "footprint" for the Complex. This footprint was used as a tool to evaluate existing available real estate and to determine the feasibility of the available sites for development. The team then created two possible options for the new Complex. Both call for a combination of new construction and expansions and renovations to existing facilities, and both provide the basis for facilities that will contribute to improved public safety for the foreseeable future. The Options are summarized below:

Option A – Veterans' Memorial Drive

The creation of a new Emergency Services Complex on the Veteran's Memorial Drive site coupled with an expansion of the West End Hose Company No. 3, offers several improvements over the Borough's current Emergency Services facilities, as well as opportunities for the Borough to make their facilities more cost-efficient. Specifics of this Plan are:

- A new Public Safety Building, housing the Police Department, Violations Department, and Municipal Court.
- A new Fire Department Building, housing Lincoln Hose Company No. 4, Engine Company No. 1, and the Rescue Squad and maintenance operations.

- Expansion of the West End Hose Company to house the Central Hook and Ladder Company.

Option B – Williams Street

Option B, like the Veteran’s Memorial Drive Plan, calls for the creation of a new Emergency Services Complex, but located on Williams Street, coupled with an expansion of the West End Hose Company No. 3 and a new Public Safety building located on Lot 7 (High St.) . This plan improves the Borough’s current Emergency Services facilities’ capabilities and capacity, on high-visibility sites with excellent access to both primary and secondary Somerville streets. Specifics of this Plan are:

- A new Public Safety Building, housing the Police Department, Violations Department, and Municipal Court.
- A new Fire Department Building, housing Lincoln Hose Company No. 4, Engine Company No. 1, and the Rescue Squad and maintenance operations.
- Expansion of the West End Hose Co. to house the Central Hook and Ladder Co.

2. EXISTING FACILITIES ANALYSES

THE SOMERVILLE POLICE DEPARTMENT currently operates out of a borough-owned building, built in the 1950's as a beer distribution warehouse. The building was later renovated to house computers for the adjacent bank building, until it was renovated to accommodate the Somerville Police Department in 1978.

The Somerville Police Department building is approximately half the size recommended by the International Association of Chiefs of Police. Built some 50 years ago, the building is decidedly low-tech and fails to meet a number of standards set by the Department of Corrections. Given the extent of deficiencies in terms of space and building operating systems (heating, plumbing, etc.) this report is limited to a photographic comparison showing Somerville's facility in relation to a modern facility recently completed in Watchung.



Fig 1a – Somerville Police Department



Fig 1b – Watchung Police Department & Municipal Court

In describing the look of their new facility, Watchung Lieutenant Whelan stated that “The town council had a specific image in mind...a building that looked Municipal”



Fig 2b – Watchung PD – Conference Room

Fig 2a – Somerville PD – No Conference Room



Fig 2a – Somerville PD – No Sally Port

Fig 2b – Watchung PD – Secured Sally Port

The sally port allows safe transport of prisoners to and from the department, eliminating contact with civilians. By code the Sally Port includes a link that does not allow the interior door to open while the garage door is open.



Fig 3a – Somerville PD – Fingerprinting

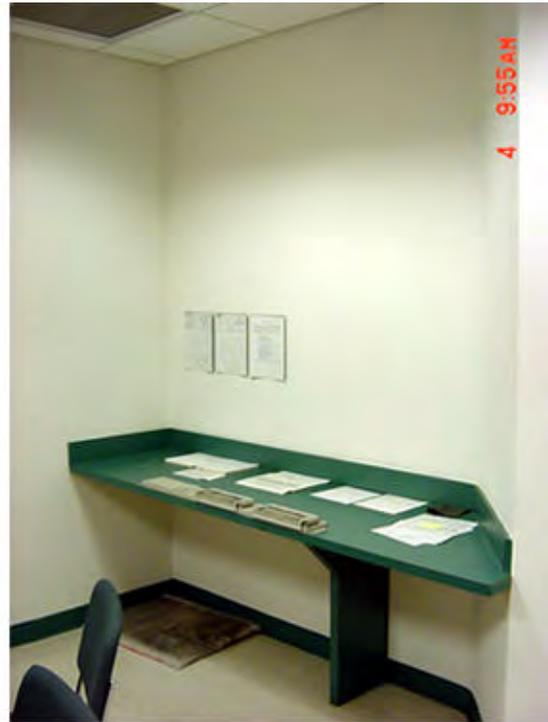


Fig 3b – Watchung PD – Fingerprinting

“Our everything room” – description by Somerville Police Chief Rose of the room used for fingerprinting (both for civilian records and criminals). The Watchung Police department uses a dedicated fingerprinting room accessible from the front public entrance.



Fig 4a – Somerville PD – No Interview Room

Fig 4b – Watchung PD – Interview Room

The Somerville Police Department uses their dilapidated and cluttered (no storage available) Detective Bureau office as their interview room. As seen in Watchung, a police interview room should be a distraction free environment with recording equipment and a place to secure prisoners



Fig 5a – Somerville PD Cell Block



Fig 5b – Watchung PD – Cell Block with
Corridor to Municipal Court



Fig 4a – Somerville PD – Rented Municipal Court

Fig 4b – Watchung PD– Municipal Court

Lacking a Municipal Court Room, the Somerville PD must transfer prisoners from the cell block to a rented space in Raritan Borough. The Watchung PD Cell block is located a door away from the Municipal Court Room.



Fig 4a – Somerville PD – Stairwell – Violates
Numerous Building Codes

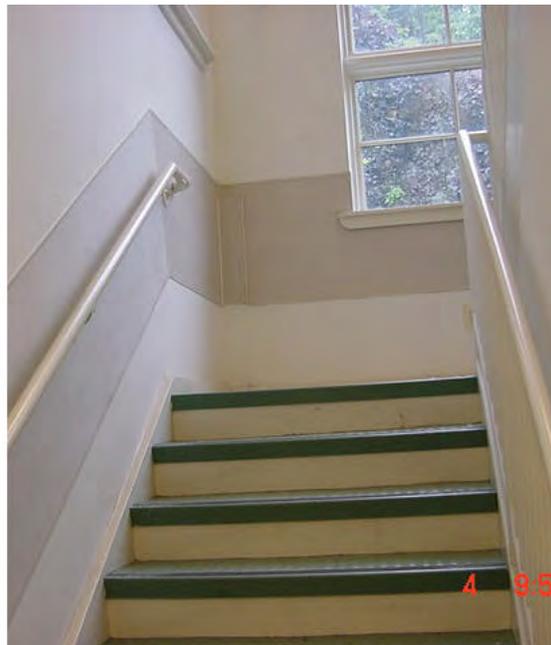


Fig 4b – Watchung PD– Stairwell



Fig 4a – Somerville PD – Evidence Drop-off



Fig 4b – Watchung PD– Evidence Drop-off



Fig 4a – Somerville PD – Records



Fig 4b – Watchung PD– Records



Fig 4a – Somerville PD – “Locker Rm.”



Fig 4b – Watchung PD- Locker Rm.



Fig 4a – Somerville PD – Bathroom



Fig 4b – Watchung PD- Bathroom



Fig 4a – Somerville PD – Mechanical Rm.



Fig 4b – Watchung PD– Mechanical Rm.



Fig 4a – Somerville PD – Electrical Rm.



Fig 4b – Watchung PD– Electrical Rm.

4. Recommended Upgrades for site to maintain its Current Uses and Functions.

A. Exterior door and window upgrades to improve comfort and reduce unnecessarily expensive heating costs. **\$35,000**

Upgrades to wall, partitions, and security doors to improve security and isolate public from criminal element. **\$100,000**

B. Reconstruction of stairs to comply with applicable codes. **\$50,000**

- C. Upgrades to locker rooms, toilets, and showers to comply with equal employee status (female/male) as well as for safety of officers (i.e., environmental and biological exposure) **\$75,000**
- D. Elevator renovation could be an issue if officers were assigned desk duty while recovering from field injury. **\$75,000**
- E. Building heating, electric, and related utility systems require replacement to meet other improvements, as noted above. **\$250,000 plus**
- F. Additional ADA upgrades are required, but should be encompassed in items noted.
- G. Emergency power needs to be increased to provide a functioning operation during potential disasters, which could affect primary electric systems.

Total of Suggested Improvements: \$585,000

5. General Observations:

The images above provide more of a summary of the state of the Somerville Police Department facility than any technical description. Expenditures for this building will only help to remedy building operating systems. Overall concerns regarding the building's capacity to house safe, efficient police operations in appropriate setting that meets code, is of adequate size, and holds the required constructed spaces can not be achieved without tearing down the existing facility and starting over.

THE SOMERVILLE CENTRAL HOOK & LADDER COMPANY NO. 1, established in 1880, currently operates out of a company-built and owned building built circa 1900. The “Hooks” began plans for this building in 1896 when they purchased a new hand-drawn “Wonder” truck, which was too large to fit in their Union Street building. During the planning phase for this building, the Hooks had the foresight to provide space for horse stalls, anticipating the need for a horse-drawn apparatus. (fig. 1)

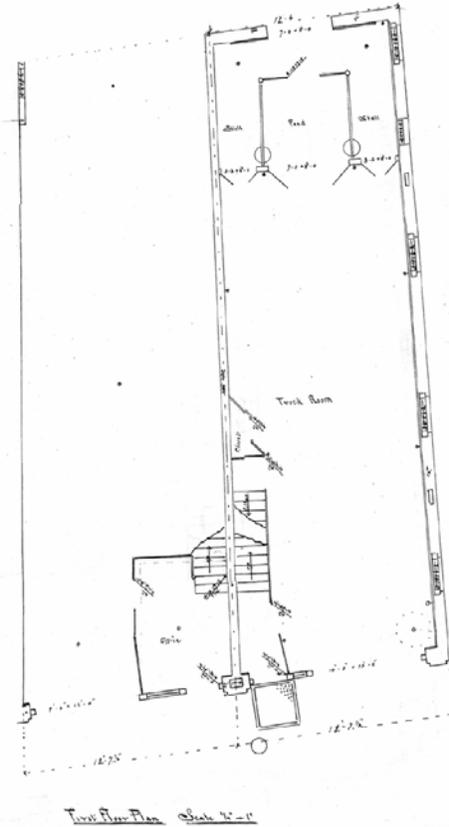


figure 1. – Original design drawing from 1900 showing horse stalls at rear of building

1. Current Use:

A. Function – In addition to the fire company, the building currently houses several residential apartments as well as a retail store. The southern portion of the building, housing the store and apartments above, was sold off in the 1960s in order to fund renovations necessary to accommodate a new, motorized apparatus. Above the truck bay, in the portion still owned by the Hooks, there is a second floor assembly area used for training, small gatherings and other functions related to company needs. During these functions, the company utilizes a small second story kitchen addition completed in 1992.

B. Occupants – Occupants include fire company personnel, family, and friends on an as-needed basis, as well as residents in a third story apartment.

C. Apparatus – 1984 Seagrave Tractor-Drawn Tiller, due for replacement in 2004.

2. Location: 24 Division St. Somerville, NJ

A. Site Accessibility –

1. Respondents – **Extremely difficult to reach** at certain times of day given its proximity to Main St and Somerville’s Central Business District. During events on Main St.: Memorial Day, St. Patrick’s Day, Street Fairs, etc the primary route for respondents is closed off entirely.

2. Apparatus - Division Street in 1902 was a perfect match for a hand-drawn piece of equipment. Today, the 30' wide street allows parking on one side, and is no longer appropriate for fire fighting apparatus. At 54' in length, the current apparatus can barely negotiate the turn-out onto an empty street. With continued growth in food establishments, specialty shops, and other business services, Division St. is seldom empty. **On a daily basis, cars park both directly in front of and across the street from the bay door, making equipment exit difficult if not impossible (as has happened).** (fig. 2)



figure 2. – view looking South on Division St. – Truck blocking bay door

B. Parking – Zero dedicated spaces. Respondents to the Hook & Ladder Co. typically park their cars on the Division St. sidewalk, creating a hazard for pedestrians and a nuisance to local shop owners. Although parking is available in the rear of the building, poor access to the lot, coupled with the need for quick response time, make use of this lot undesirable. Respondents to a fire summons during daytime conditions must also deal with the busy thoroughfares of Somerville (in addition to the presence of a growing county seat of government) from both a vehicular and pedestrian basis. Safe, secure, and accessible parking is vital to rapid response by volunteers to an emergency call.

3. Assessment of Building Spaces vs. Space Needs

The primary concern with the hook and ladder company building is the grossly undersized truck bay. The company, due to upgrade its apparatus in 2004, is being forced to consider a customized unit that will fit its undersized building instead of one that will fit the community's needs. Even if the bay is able to squeeze in a new apparatus, the width of the bay does not allow for loading, unloading, and cleaning of support equipment. (fig. 3) In order to execute these functions the current apparatus must be pulled out onto Division St. This practice leads to infiltration of exhaust into neighboring shops and restaurants as well as a complicated and potentially dangerous exit of the building. In addition to the floor space limitations, the existing overhead door height will not provide clearance for new apparatus under consideration (customized from standard). Given the existing ceiling height, raising the header is not a viable option.



figure 3 –view into existing truck bay

4. Assessment of Building Operating Systems

- A. Building Structure – **First floor slab over partial basement is not structurally adequate to hold 43,000 lb. apparatus.** Basement door hatch is located in potential line of apparatus travel. Rear wheels of apparatus have rolled over this door, nearly leading to a portion of the apparatus falling through into the basement stairwell.
- B. Exterior Items - Walls are of brick construction. There are newer insulated window systems. Roof is single-ply EPDM about five years old.
- C. Plumbing Systems are adequate for building use, but the hot water system is undersized for small gatherings and functions and there is no shower area for use by volunteers.
- D. HVAC System – there is a combination of systems in the building involving hot water heat, rooftop ducted AC, for the primary areas. (fig. 4)



figure 4 – view of existing mechanical room

- E. Electrical System – **Residential sized system (undersized for any major upgrades that could be required for emergency conditions).**
- F. Emergency Power System – **None.**
- G. Interior Finishes – Are a combination of original (plaster/brick) and newer sheet rock with paint, tile, paneling and/or wallpaper finishes

5. Existing ADA Code and Building Code Compliance Violations

A. ADA Code Violations

1. No handicapped-accessible entrances at ground floor level.
2. No elevator to second floor meeting room.
3. Second story restrooms do not meet overall room size and fixture height requirements.
4. Stair access to second and third floor will require upgrades to handrails, emergency lighting, and doors at landings (fire rated).

B. Building Code Violations.

1. Mixed-use building with no fire separations or fire protection. As mentioned in section 1A, the hook and ladder building serves as a firehouse, an apartment building, and a retail space. The buildings construction predates today's stringent building codes dealing with required fire separation between mixed-use groups. **If a fire were to break out anywhere between South St. Bistro and the Hook and Ladder Co., there would be nothing internally to stop the fire from consuming the entire block.**

6. Recommended Upgrades for Site to Remain as Current Use/ Function.

Note that these recommendations do nothing to remedy the site and building space inadequacies described in sections 2 and 3. Given a simplified cost-benefit review, these changes are at best a short-term solution to problems that are not going to disappear but will likely become worse.

- A. Fire suppression system throughout entire building.
- B. Emergency Generator.
- C. Partial basement floor reinforcement.
- D. Interior bollards around basement hatch.

7. Cost / Benefit of Building Relocation.

- A. Current building in Central Business District becomes a ratable if operations are moved to a larger more accessible site.
- B. Unnecessary risks to Hook and Ladder Co. personnel, the general public, and borough properties (public and private) eliminated.
- C. Borough eliminates the rent paid to the Hook and Ladder Co.
- D. Money gained by company through sale of building relieves pressure on volunteers to generate funds through the year.
- E. Operations at newer location will be more efficient and could lead to cost savings if merged with other fire houses and emergency services.
- F. Modern facilities improve volunteer applications and retention.
- G. Modern facilities will allow for planning and organizing operations to meet needs of an expanding and diverse community.
- H. Modern facilities may be required to eventually meet the need for a paid department staff.

8. General observations. The building as designed has stood the test of time with thought and planning. However after 100 years, the demands of a modern community, constantly changing codes, changing apparatus (hand, to horse, to tractor drawn) changing buildings (size, construction, use, etc) and emergencies to be responded to, have all led to the current decision of stay or move forward. No organization could plan or envision what the future could hold when this building was first conceived. Therefore the current organization must now make a decision, a decision vital to the life-saving service it provides to the community—just as it did in 1896.

THE SOMERVILLE WEST END HOSE COMPANY NO. 3, established in 1888, currently operates out of a borough-owned building dedicated in 1971. The current facility replaced a narrow, two-story structure built in 1888 to house a hand-drawn carriage (currently the Fire Museum).



figures 1a, 1b. – West End Hose Co. Buildings – 1888 building constructed to hold “new four wheeled hose carriage that had to be hauled by hand”. Current facility dedicated in 1971 *“The arrival of the new Hahn pumper saw the West Ends moving from their Doughty Avenue headquarters to their present location on High Street”*.

1. Current Use:

- A. Function – Two-bay, drive-through firehouse. Above the truck bay there is a second floor assembly area, kitchen, and a recreation room also used for training, small gatherings, and other functions related to company needs. The truck bays are also used by the borough of Somerville as a polling location for local and national elections.
- B. Occupants: West End Hose Co. #3- Fire company personnel, family, and friends on an as-needed basis.
- C. Apparatus – 1989 Pierce Pumper and 1996 Reserve Pierce Pumper.

2. Location: 133 W. High St. Somerville, NJ

A. Site Accessibility –

- 1. Respondents – Close to major thoroughfares, yet accessible via numerous secondary streets, the West End Hose building provides easy access to respondents.
- 2. Apparatus – The combination of a wide street and a 35’ long apron in front of the bay doors provide ample room for the apparatus to turn. The drive thru bays with parking lot access, eliminate the need for a difficult and dangerous apparatus back-in. As mentioned above, the proximity to local thoroughfares combined with access to secondary streets facilitates a fast response time for the drivers of the apparatus.

B. Parking – The facility itself has no dedicated spaces for parking, however, High St. parking combined with the public lot behind the building provide adequate, accessible spaces.

C. Flood Plain – NA.

3. Assessment of Building Spaces vs. Space Needs:

The majority of spaces in the West End Hose Co. meet the current needs of the company. One area of concern is the proximity of bay door jambs to adjacent walls. The bay door jambs, placed directly on the walls running parallel to the apparatus, leave little room for loading and unloading equipment. This relationship eliminates the possibility of providing workbench space adjacent to the apparatus.

4. Recommended Upgrades for Site to Remain as Current Use/ Function.

- A. A handicapped lift for access to second floor would be desirable, allowing general accessibility as well as the potential to serve as a disaster shelter in an emergency. **\$25,000**
- B. Minor ADA upgrades should be planned for in future IE signs, stair rails, etc.

\$10-\$15,000

C. Addition or modifications to the building for a shower locker room would be of value to service personnel but also as an aide in disaster emergencies. May require building expansion. **\$50-\$75,000**

D. Undersized toilet rooms should be upgraded as either part of shower locker room or separately.

\$30,000 +/-

E. Deterioration of under-slab radiant heating system. While not imperative, the system should be altered for efficiency and general use of equipment. **\$50,000**

F. Second floor areas and truck bays require alterations regarding current HVAC for exhaust and make up air. **\$20,000**

Total of Suggested Improvements: \$215,000

5. General Observations:

The building has some minor drawbacks but overall should serve to meet its intended function for the foreseeable future. There are some required and desirable building operating systems upgrades that would enhance its usefulness as an emergency facility (see section 4 above). Regarding the site, a desirable option in the future would be to purchase one of the adjoining residential units. This would provide a growth option and enhance the site further for many years to come.

THE SOMERVILLE ENGINE COMPANY NO. 1, established in 1878, currently operates out of a borough-owned building dedicated in 1961. The borough council authorized this two-bay Engine house in 1960 when a new Mack apparatus was purchased. Previously, the company operated out of a facility on Maple St. built in 1873, which “By 1960 when the new Mack was purchased...was too small and the one-way street too narrow”.



figure 1. – existing Engine Co. 1 facility – dedicated in 1961

1. Current Use:

- A. Function – In addition to the Engine Company, the building currently houses the borough’s Fire Apparatus Maintenance Department. The portion dedicated to maintenance is used for apparatus maintenance, hose maintenance, parking meter repair, vehicle storage, turnout cleaning, and storage of extensive materials and supplies related to the department’s functions. The portion occupied by Engine Co. consists of one truck bay on the ground level. Above the truck bay there is a second floor assembly area, kitchen, and a recreation room used for training, small gatherings, and other functions related to company needs.
- B. Occupants: Engine Company #1- Fire company personnel, family, and friends on an as-needed basis.
Maintenance Department – two staff members on a daily basis.
- C. Apparatus – 1 Pierce Pumper.

2. Location: 170 E. Main St. Somerville, NJ

A. Site Accessibility –

- 1. Respondents – Located just outside the dense central business district, the Engine Company No. 1 location provides relatively easy access for respondents via Main St., Veteran’s Memorial Drive, and Park Avenue. **Park Avenue is of particular importance, providing a secondary means of access that allows respondents to bypass the often crowded thoroughfares.**
- 2. Apparatus - Main St. provides ample space for the current Apparatus to turn onto. The intersection with Veterans’ Memorial, however, does often become congested and the lack of a full functioning traffic signal often leads to a difficult exit.

B. Parking - A small off street parking lot provides room for 11 cars.

C. Flood Plain – Located approximately 100 feet from Peter’s Brook and at the bottom of a hill, Engine Co.1 is in the heart of the flood plain. On two separate occasions (Floyd in 2000 and Doria in 1970) the entire first floor was submerged under more than three feet of water.



figure 2. – view of Engine Co.1 bay door during Hurricane Doria - 1970

3. Assessment of Building Spaces vs. Space Needs

A. Engine Co. #1 – **The overhead doors at Engine Co. #1 are not and can not be tall enough.** At the time of their last apparatus upgrade, Engine Co. 1 had to first raise the header to their bay door and then meticulously customize and compromise on the specifications for their new Pierce. Clearance aside, the spaces for the Engine Co. are adequately sized to meet their current demands.



figures 3a, 3b. – photo taken in 1960 showing generous clearance above and around the apparatus. – photo taken in 2003 from same vantage point. With the combination of customized apparatus and raised header the apparatus still barely fits through the bay door.

B. Maintenance Department - To fulfill the space needs determined in an analysis of the maintenance department's functions (see space needs), **an additional 5,800 SF is necessary (400% their current size.)** Some of the facility's numerous deficiencies include:

- inadequate bay door height.
- inadequate bay depth to fit various apparatus.
- no drive thru access.
- inadequate storage areas for oil, gear, extinguishers.
- no clean room.
- no dedicated space for meter repair (currently overtaking the office area).
- inadequate vehicle storage area (bucket truck, SUV, boat).
- inadequate area for hose maintenance.
- inadequate laundry area.

4. Recommended Upgrades for Site to Maintain its Current Use / Function.

- A. Hot water system needs to be upgraded. In the event of actual emergency the hot water heater could not meet demands for health needs and/or decontamination. **\$10,000**
- B. Electrical system appears to be very undersized and needs to be increased. **\$75,000**
- C. The function the building serves demands the presence of an emergency generator to meet current and future emergency services for the community. **\$100,000**
- D. A handicapped lift for access to second floor would be desirable, allowing general accessibility as well as the potential to serve as a disaster shelter in an emergency. **\$25,000**

Total of Suggested Improvements: \$210,000

5. General Observations:

This building can continue to function in its current capacity and requires little expenditure to mitigate building operating systems deficiencies. However, inadequate operating space for the maintenance department, inadequate bay dimensions for today's firefighting apparatus, and the location within the flood plain, all are major deterrents to the services provided and to the idea of investing anything towards maintaining this location as part of the Emergency Service Operation of Somerville.

THE SOMERVILLE LINCOLN HOSE COMPANY NO. 4, established in 1891, currently operates out of a company-built and owned building dedicated in 1974. **The current facility replaced a narrow three story structure built in 1901, (unable to accommodate an apparatus upgrade in the early 1970's) also located on Warren St.**



figures 1a,1b,1c – Lincoln Hose Buildings - Constructed in: 1891, 1901, 1974

1. Current Use:

A. Function – One-bay firehouse. Adjacent to the truck bay are recreation, kitchen, and assembly areas used for training, small gatherings and other functions related to company needs. The assembly area is large enough to be used for community functions, but does not meet code requirements to do so.

B. Occupants: Lincoln Hose Co. #1- Fire company personnel, family and friends on an as-needed basis.

C. Apparatus – 1 E1 Pumper

2. Location: 34 Warren St. Somerville, NJ

A. Site Accessibility –

1. Respondents – Located between Main St. and Veteran’s Memorial Drive, the Lincoln Hose Co. can only be reached via a major east-west thoroughfare. **The lack of a secondary road leading to Warren St. makes the Lincoln Hose site difficult to reach at peak travel times.**

2. Apparatus - The 37’ apron in front of the firehouse provides adequate space for the E1 to turn out onto Warren St. However, once on Warren St., the route towards Main St. is often blocked by delivery trucks.



figure 2 – delivery trucks blocking route towards Main St.

- B. Parking - A small off-street parking lot provides room for 8 cars. The cooperation of neighbors across the street has alleviated the pressure for respondents to find additional parking. However, the continued use of this undeveloped lot could be in jeopardy, as it is located in an area slated for development.
- C. Flood Plain – NA.

3. Assessment of Building Spaces vs. Space Needs:

The overall size as well as the breakdown of spaces in the Lincoln Hose Co. building meet the current needs of the department.

4. Recommended Upgrades for Site to Remain as Current Use / Function.

- A. The building would benefit from the addition of a shower locker room facility both for health and health emergency operations. **\$60,000**
- B. Lavatories would benefit from alterations to comply with ADA requirements and for purposes of hall rental for functions. **\$40,000**
- C. There seems to be a problem with heating system regarding back assembly area which should be corrected. **\$60,000**
- D. Electric power seems small but adequate for current operations but would require upgrade depending on changes to building. **\$50,000**
- E. There are some additional ADA requirements which should be corrected regarding alternative exit paths. **\$30,000 +/-**
- F. For emergency purposes the building would benefit from the addition of a stand by generator. **\$75,000**

Total of Suggested Improvements: \$315,000

5. General Observations:

Currently the building site has advantages and disadvantages, but for the short term should continue to be of value. The development of opposite or adjacent site could add further disadvantages (narrow road subjected to higher use traffic). (Possible control of situation through elimination of all on-street parking except for short duration deliveries.)

The site could be enhanced thru purchase of either on adjacent property or the area directly behind the building. The rear property could provide expansion of parking, addition of a second unit, second floor assembly purposes and/or emergency disaster housing, as well as a second means of access for drive thru capability. Obviously all these options would entail building alterations and/or expansion. It should be noted and verified the building was originally designed for two bays and has structure for a second floor. The location would be advantageous to keep, as it provides excellent distribution of fire equipment around town locations.

THE FIRST AID AND RESCUE SQUAD OF SOMERVILLE, incorporated in 1933, currently operates out of a squad-owned building dedicated in 1941.



figure 1. – Existing Rescue Squad Building

1. Current Use:

- A. Function – Four bay First Aide and Rescue Squad building. Above the truck bays there is a second floor assembly area, kitchen and recreation room; used for training, small gatherings and other functions related to company needs. There is also an office area on the second floor, relocated from the ground level after the office and all its contents were destroyed by flood waters of Hurricane Floyd.
- B. Occupants: First Aide and Rescue Squad of Somerville Inc.- Rescue Squad personnel, family and friends on an as needed basis.
- C. Apparatus – 2 Ambulances, Rescue Truck, Technical Rescue Vehicle (converted bus), GMC Suburban, Mass Casualty Response Unit (trailer), Jet ski

2. Location: 21 Park Ave. Somerville, NJ

A. Site Accessibility –

- 1. Respondents – Central location, close to major thoroughfares, yet accessible via numerous secondary streets, the Rescue building provides easy access to respondents.
- 2. Apparatus – Front 2 bays provide easy access onto park Ave. **Side bays have limited turning area for Rescue Truck and Technical Rescue Vehicle to exit onto Park Ave.** Once on Park Ave., as mentioned above, the central location with access to primary and secondary roads facilitates a fast response time for the drivers of the apparatus.

B. Parking – The facility itself has 5 dedicated spaces for respondent parking.

C. Flood Plain – Located just across the street from Peter's Brook and at the bottom of a hill, the Rescue Squad building is in the heart of the flood plain. On two separate occasions (Floyd in 2000 and Doria in 1970) the entire first floor was flooded under several feet of water. Location of this vital service within a flood plain presents an unnecessary risk and increased insurance costs, which must be paid for by ongoing fund raising. Monies saved on an alternative location could be better used on new equipment, training, etc.



figure 1. – View of Peter's Brook during Hurricane Doria - 1970

3. Assessment of Building Spaces vs. Space Needs-

Over 60 years in age, the Rescue Squad bay dimensions are no longer adequate to house today's apparatus. In a similar fashion to the Hook and Ladder Company and Engine Company No. 1; the Rescue Squad has been forced to customize, compromise, and even decide against certain apparatus upgrades. Here again a major limiting factor is lack of clearance. Given present limitations, the Rescue Squad is unable to fit a standard Box Type Ambulance in their facility. This type of ambulance allows respondents to stand while treating patients in transit.



figure 2. – View of current Ambulance in Bay

In addition to clearance concerns, the Rescue Squad must currently store a portion of its vehicles outdoors. These unhoused vehicles include: the Jetski, Suburban and Mass Casualty Response Unit.



figure 2. – View of unhoused vehicles

Finally, the current Rescue Squad building lacks dedicated areas for decontamination, medical oxygen bottle storage, medical supply storage, medical equipment storage, and general apparatus bay storage.

4. Recommended Upgrades for Site to Remain as Current Use / Function.

- A. Building could use roof work to correct a problem with recent roof work. **\$20,000**
- B. Some interior doors should be changed to fire rated to protect sections of building and isolate a possible fire. **\$15,000**
- C. Ventilation systems require expansion or upgrade in truck bay areas to deal with exhaust fumes from engines. **\$20,000**
- D. Electrical system is small given the loads and probable demands if it were needed as a temporary housing location for disaster victims. **\$50,000**
- E. Exit signs and some requirements for ADA must be addressed. **\$10,000**
- G. Given the nature of equipment and operations a Primary Fire and security alarm should be provided for the building. **\$25,000** An emergency generator would be desirable but not practical given size of site. **\$60,000+**

Total of Suggested Improvements: \$200,000

5. General Observations:

The First Aid and Rescue Squad of Somerville is an independent, incorporated operation. Because of the incredible efforts made by the volunteers of this organization and the broad range of services they provide, the Somerville Rescue Squad has been able to withhold attempts at takeover from private, for-profit organizations. This has been accomplished despite the increasing number of calls for response (1,400 calls in 2002) and the ever-increasing demands placed on the volunteer EMTs to gain and keep certification.

It appears that while current costs for some building upgrades are not excessive, they do not meet the needs for present nor future services adequately. As can be seen, the building and site have reached the limit of what they can be used for and are in turn placing yet another limit on the current and future life safety services provided by the volunteers to the public.

3. PRELIMINARY SITE DESIGN OPTIONS

Option A – Veteran’s Memorial Drive + West End Hose Expansion



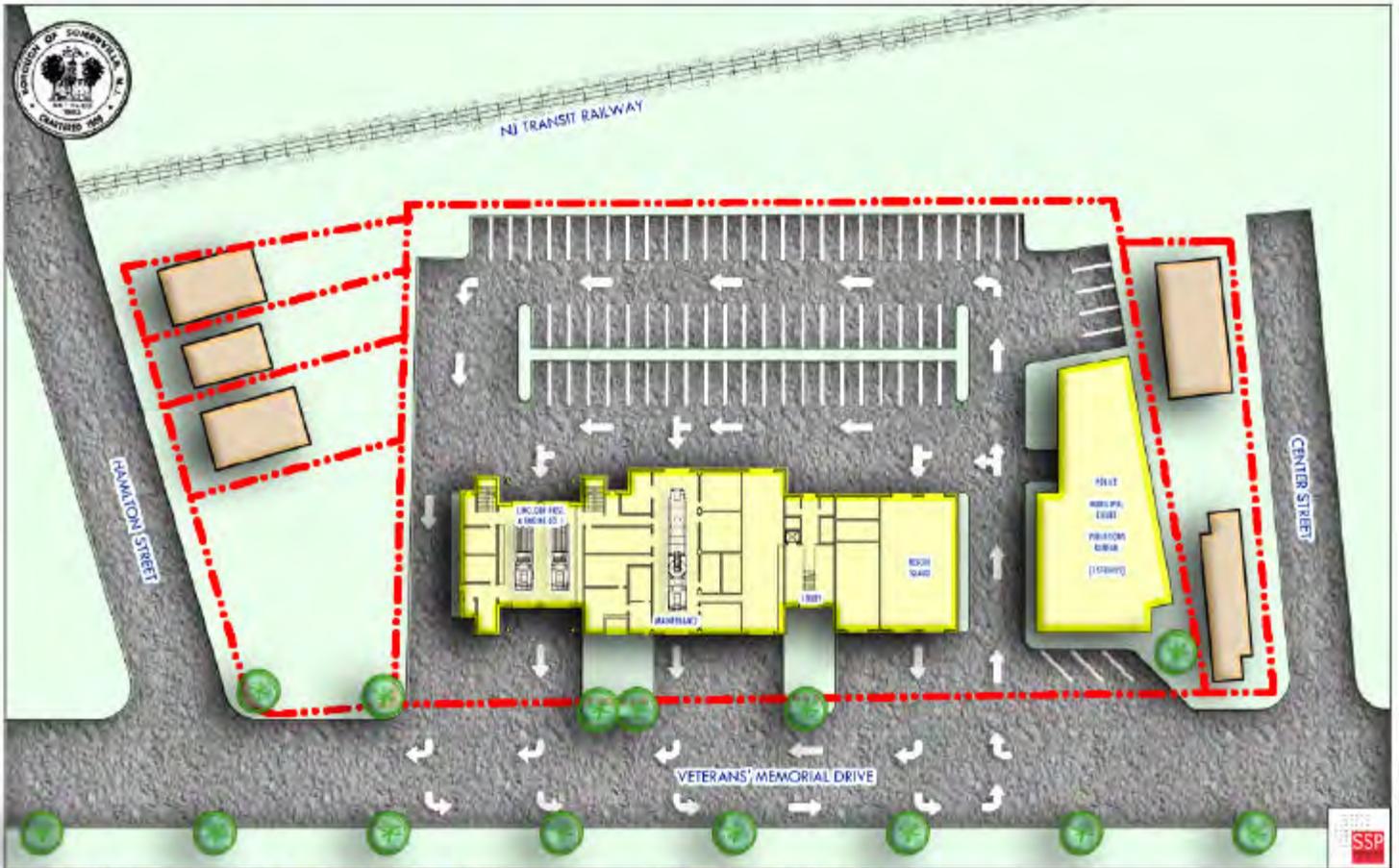
The creation of a new Emergency Services Complex on the Veteran’s Memorial Drive site (above), coupled with an expansion of the West End Hose Company No. 3, offers several improvements over the Borough’s current Emergency Services facilities, as well as opportunities for the Borough to make their facilities more cost-efficient. Specifics of this Plan are:

- A new Public Safety Building, housing the Police Department, Violations Department, and Municipal Court.
- A new Fire Department Building, housing Lincoln Hose Company No. 4, Engine Company No. 1, and the Rescue Squad and maintenance operations.
- Expansion of the West End Hose Company to house the Central Hook and Ladder Company.

The new Complex would provide fire department, maintenance, and rescue squad facilities appropriately sized spaces to accommodate both current and future equipment and apparatus, as well as space for personnel parking. The public safety component would provide the police department with appropriately sized, code abiding, professional spaces as well as an integrated Municipal Court and Violations Bureau. Features of the Complex would include a drive-through bay for all fire trucks, offering ease-of-use and improving public safety over the current facilities and sites. Features of the site itself include the opportunity to create a revitalizing presence to the Veteran’s Memorial area of Somerville through the presence of a community building and a strong design, and improved street access over most of the existing fire fighting buildings. In addition, the site is located securely above the Peter’s Brook flood plain. This option would also permit the Borough to designate several of the current Emergency Services buildings as tax-ratable, or to consider their use for other Borough uses, such as recreation. Finally, the site offers future generations the ability to expand the facilities, if necessary.

This Option also calls for the expansion of the West End Hose Company. As in the new Emergency Services Complex, the expansion would allow for increased bay space, and space appropriate for fire fighting apparatus and equipment and vehicle maintenance.

VETERANS' MEMORIAL DRIVE OPTION



PROPOSED SOMERVILLE EMERGENCY SERVICES COMPLEX - VETERANS' MEMORIAL DRIVE OPTION (lots 10-16 acquired)



PROPOSED HOOK & LADDER ADDITION AT WEST END HOSE COMPANY NO. 3 - WEST HIGH STREET (lot 8 acquired) - VETERANS' MEMORIAL DRIVE OPTION (lots 10-16 acquired)

Plan

Option B – William Street + Lot 7 Public Safety Building + West End Hose Expansion



Option B, like the Veteran’s Memorial Drive Plan, calls for the creation of a new Emergency Services Complex, but located on the William Street site (above), coupled with an expansion of the West End Hose Company No. 3. And a separate Public Safety Building located on Lot 7 (High Street) This plan improves the Borough’s current Emergency Services facilities’ capabilities and capacity, on a high-visibility site with excellent access to both primary and secondary Somerville streets. Specifics of this Plan are:

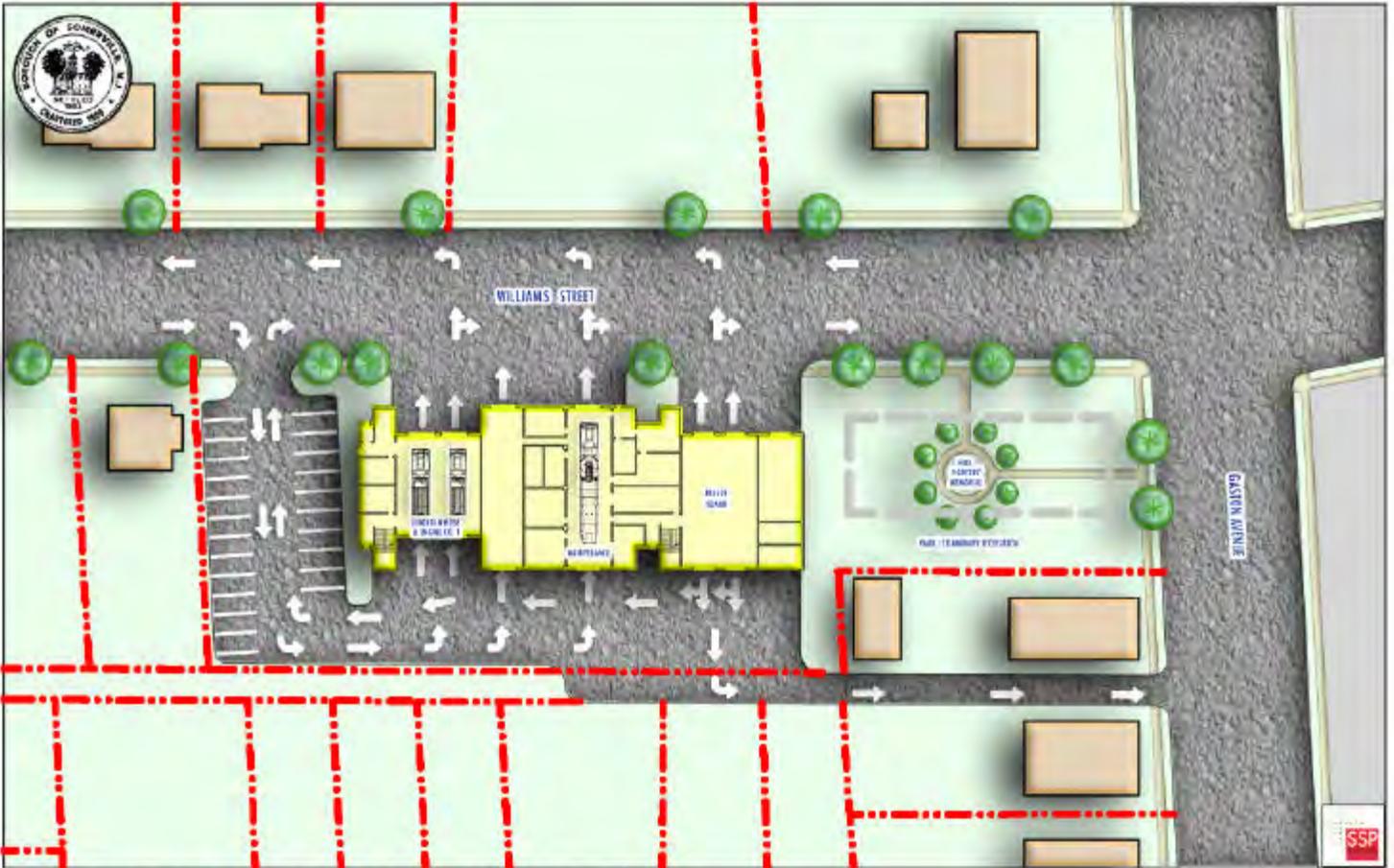
- A new Public Safety Building, housing the Police Department, Violations Department, and Municipal Court.
- A new Fire Department Building, housing Lincoln Hose Company No. 4, Engine Company No. 1, and the Rescue Squad and maintenance operations.
- Expansion of the West End Hose Co. to house the Central Hook and Ladder Co.

The new Complex, as in Option A, would provide fire department, maintenance, and rescue squad facilities appropriately sized spaces to accommodate both current and future equipment and apparatus, as well as space for personnel parking. Again, as in option A, the public safety component would provide the police department with appropriately sized, code abiding, professional spaces as well as an integrated Municipal Court and Violations Bureau Features of the Complex would include a drive-through bay for all fire trucks, offering ease-of-use and improving public safety over the current facilities and sites. The site itself is highly visible, with accessibility to both Gaston Avenue and William Street, and would be appropriate as a place to showcase Somerville’s civic pride through an engaging building and/or a corner park/Fire Fighters memorial. The site is also above the Peter’s Brook flood plain.

However, the site also presents certain constraints. The site offers only limited depth, with less room for expansion, if required. There is also only room for a maximum of 21 parking spaces on the site, if a park/memorial space is built.

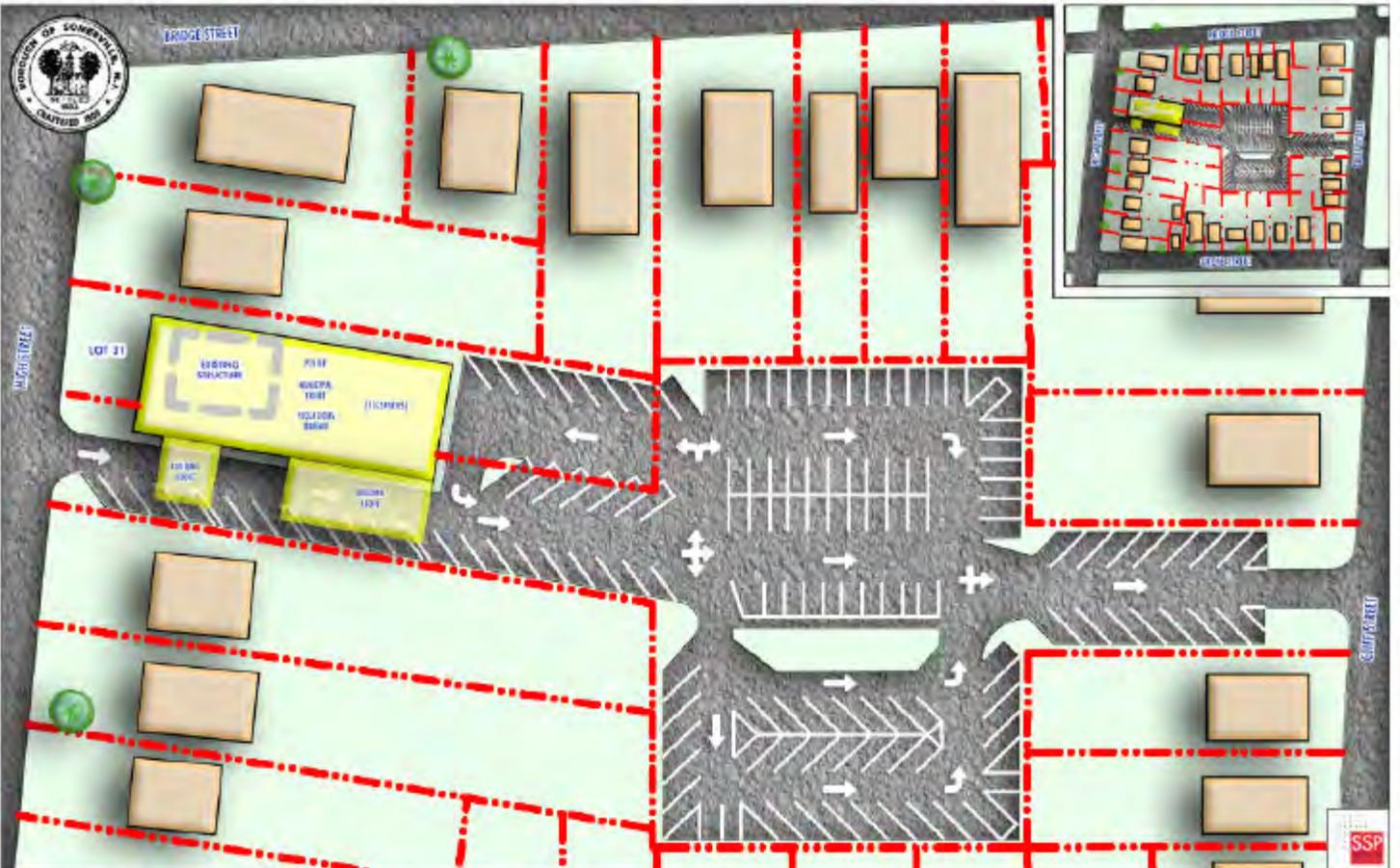
Option B also calls for the expansion of the West End Hose Company. As in the new Emergency Services Complex, the expansion would allow for increased bay space, and space appropriate for fire fighting apparatus and equipment and vehicle maintenance.

WILLIAMS STREET OPTION



PROPOSED SOMERVILLE EMERGENCY SERVICES COMPLEX - WILLIAMS STREET OPTION (lots 16 -17 required)

3.5



PROPOSED PUBLIC SAFETY BUILDING - LOT 7 (lot 31 required)

3.6

WILLIAMS STREET OPTION



PROPOSED HOOK & LADDER ADDITION AT WEST END HOSE COMPANY NO. 3 - WEST HIGH STREET (lot 8 acquired)

4. SPACE NEEDS

INTRODUCTION

This section of the Needs Assessment defines space needs in a spreadsheet format. The spaces addressed in this section account for all of the spaces within the building, including individual rooms, equipment space needs within a room, circulation space, utility spaces and space occupied by the structure and walls of the building.

The spreadsheet defines space requirements for two separate buildings, which have been identified as the Fire Department Building and the Public Safety Building.

Fire Department Building. This building consists of the following components:

- The Lincoln Hose Company
- Engine Company No. 1
- Hook and Ladder Company
- Rescue Squad
- Maintenance
- Building Support Spaces

Public Safety Building. This building consists of the following components:

- Police Department
- Municipal Court
- Violations Department
- Building Support Spaces

SPREADSHEET FORMAT

Building Summary. The first page of the spreadsheet is the Building Summary. This summary indicates the building gross area needs for both of the buildings comprise this project. The first and second columns identify the building and its gross area, respectively. The third column indicates which pages within this spreadsheet provide the back-up data that justifies the gross area for each building. The sum of the gross areas for both buildings is indicated at the bottom of the Building Summary page.

Fire Department Building Area Summary. The next page of the spreadsheet provides a summary of the spaces within the Fire Department Building. Similar to the Building Summary page, this Area Summary identifies each building component and its respective net area in the first two columns. The third column indicates which pages within this spreadsheet provide the back-up data that justifies the net area for each building component. At the bottom of the Area Summary page the sum of the net areas of each component is provided and net-to-gross areas factors are calculated to arrive at the total gross area for the Fire Department Building.

Individual Building Components - Fire Department Building. Pages 5 through 12 of the spreadsheet are devoted to defining the spaces for each individual component within the Fire Department Building. The building component is identified at the top of the page (e.g., Lincoln Hose Company). The first column identifies the spaces within that component ("Space/Equipment"), and the second column quantifies the number of spaces of that type ("Quantity"). The third column provides the required area for that particular type of space ("Unit Area"), and the fourth

column provides the total space needs for that type of space ("Space Total"), which is the product of the Unit Area and the Quan Space. Finally, the last column on these pages ("Remarks") provides any additional information that might be useful in understanding that particular space in terms of function or cost. The bottom of these pages provide an area subtotal, circulation factor, and the net area for that particular building component.

Public Safety Building Area Summary. The format for this Area Summary on page 13 is nearly identical to the format for the Fire Department Building Area Summary on page 4. The only difference is that the Public Safety Building Area Summary includes an additional column to identify the net area for each bureau within the Police Department.

Individual Building Components - Public Safety Building. The remainder of the spreadsheet is devoted to defining the spaces for each individual component within the Public Safety Building in the same manner as pages 5 through 12 define the spaces for each individual component within the Fire Department Building.

Circulation Factors. It should be noted that this Space Needs spreadsheet includes two different types of circulation factors. On the Area Summaries for each building (pages 4 and 13) a net-to-gross area factor of 6 percent is included for General Circulation. This accounts for circulation outside of each component of the building, such as main corridors, stairways, and elevators. An additional circulation factor is included for each individual component of each building, as shown on pages 5 through 12 and pages 14 through 25. This accounts for circulation within each building component, such as circulation for an office to a lounge, or a lounge to a storage room. These internal circulation factors range from 10 to 20 percent, depending on the type of building component.

SPREADSHEETS

The remainder of this section of this Needs Assessment consists of the Space Needs spreadsheet pages as described above.

BUILDING SUMMARY

Building	Gross Area	Back-Up Data on Page(s)
FIRE DEPARTMENT BUILDING	41,700	4 through 12
PUBLIC SAFETY BUILDING	24,404	13 through 25
TOTAL GROSS BUILDING AREA	66,105	

FIRE DEPARTMENT BUILDING

AREA SUMMARY

	Gross Square Feet		Back-Up Data on Page(s)
Lincoln Hose Company	3,476	\$ 489,108.75	5
Engine Company No. 1	3,301	\$ 467,201.25	6
Hook and Ladder Company	4,691	\$ 630,383.55	7
Rescue Squad	9,683	\$ 1,291,669.38	8 and 9
Maintenance	9,927	\$ 1,418,717.00	10 and 11
Building Support Spaces	10,622	\$ 1,757,997.50	12
<u>SEE BELOW FOR ADD'L SPACE PRICES AND BACK UP</u>			

Total Net Square Feet		32,835
Net-to-Gross Area Factors		
Mech/Elec/Comm	0.12	3,940
Structure and Walls	0.09	2,955
General Circulation	0.06	1,970

TOTAL GROSS SQUARE FEET FIRE DEPARTMENT BUILDING	41,700
---	---------------

\$ 6,055,077.43 **NOTE: This estimate does not reflect Contingency, Soft Costs and Escalation Factors. See Tab 5 for complete estimate**

FIRE DEPARTMENT BUILDING

LINCOLN HOSE COMPANY

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks	\$/sf	ext.
GROUND FLOOR SPACES						
Apparatus Bay	1	1,040	1,040	Drive-through access	125	\$ 130,000
<i>Space includes:</i>						
• Length and width of the vehicle						\$ -
• 5-feet of clearance on all sides of vehicle						\$ -
• 52 lf of space along the length of one side wall for workbenches, storage cabinets, equipment, etc.						\$ -
						\$ -
						\$ -
						\$ -
Apparatus Bay Storage	1	200	200	Miscellaneous equipment and supplies	125	\$ 25,000
						\$ -
SECOND FLOOR SPACES						
Lounge	1	600	600	Unfinished space to be furnished and finished by company	150	\$ 90,000
<i>Space includes:</i>						
• Refreshment counter						
• Seating areas						
• Television viewing						
• Historical memorabilia displays						
• Trophies and awards displays						
Office	2	160	320		150	\$ 48,000
						\$ -
Men's Toilet Room	1	50	50	Associated with Lounge	325	\$ 16,250
						\$ -
Women's Toilet Room	1	50	50	Associated with Lounge	325	\$ 16,250
						\$ -
Miscellaneous Storage	1	120	120		125	\$ 15,000
Area Subtotal						\$ - \$ 385,125
Circulation Factor 15%					125	\$ 44,625
						\$ -
Net Square Feet - Lincoln Hose Company						\$ 385,125 140.71
Gross Square Feet - Lincoln Hose Company						\$ 489,109 140.71

FIRE DEPARTMENT BUILDING

ENGINE COMPANY NO. 1

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks			
GROUND FLOOR SPACES							
Apparatus Bay <i>Space includes:</i> <ul style="list-style-type: none"> • Length and width of the vehicle • 5-feet of clearance on all sides of vehicle • 46 lf of space along the length of one side wall for workbenches, storage cabinets, equipment, etc. 	1	920	920	Drive-through access	125	\$	115,000
Apparatus Bay Storage	1	200	200	Miscellaneous equipment and supplies	125	\$	25,000
SECOND FLOOR SPACES							
Lounge <i>Space includes:</i> <ul style="list-style-type: none"> • Refreshment counter • Seating areas • Television viewing • Historical memorabilia displays • Trophies and awards displays 	1	600	600	Unfinished space to be furnished and finished by company	150	\$	90,000
Office	2	160	320		150	\$	48,000
Men's Toilet Room	1	50	50	Associated with Lounge	325	\$	16,250
Women's Toilet Room	1	50	50	Associated with Lounge	325	\$	16,250
Miscellaneous Storage	1	120	120		125	\$	15,000
Area Subtotal			2,260				
Circulation Factor	15%		339		125	\$	42,375
Net Square Feet - Engine Company No. 1			2,599			\$	367,875
Gross Square Feet - Engine Company No. 1			3,301			\$	467,201

FIRE DEPARTMENT BUILDING

HOOK AND LADDER COMPANY

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks					
GROUND FLOOR SPACES									
Apparatus Bay <i>Space includes:</i> <ul style="list-style-type: none"> • Length and width of the vehicle • 5-feet of clearance on all sides of vehicle • 76 lf of space along the length of both side walls for workbenches, storage cabinets, equipment, etc. 	1	1,672	1,672	Drive-through access	120	\$	200,640		
Apparatus Bay Storage	1	400	400	Miscellaneous equipment and supplies	125	\$	50,000		
SECOND FLOOR SPACES									
Lounge <i>Space includes:</i> <ul style="list-style-type: none"> • Vending machines • Seating areas • Television viewing • Historical memorabilia displays • Trophies and awards displays 	1	600	600	Unfinished space to be furnished and finished by company	150	\$	90,000		
Office	2	160	320		150	\$	48,000		
Men's Toilet Room	1	50	50	Associated with Lounge	325	\$	16,250		
Women's Toilet Room	1	50	50	Associated with Lounge	325	\$	16,250		
Miscellaneous Storage	1	120	120		125	\$	15,000		
Summary									
Area Subtotal			3,212						
Circulation Factor	15%		482		125	\$	60,225		
Net Square Feet - Hook and Ladder Company			3,694			\$	-	\$	496,365
Gross Square Feet - Hook and Ladder Company			4,691			\$	-	\$	630,384

FIRE DEPARTMENT BUILDING

RESCUE SQUAD

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
GROUND FLOOR SPACES						
Apparatus Bay No. 1 <i>Space includes:</i> <ul style="list-style-type: none"> • Length and width of a rescue truck and ambulance in tandem • 5-feet of clearance on all sides of vehicles • 50 lf of space along the length of one side walls for workbenches, storage cabinets, equipment, etc. 	1	1,170	1,170	Drive-through access	125	\$ 146,250
Apparatus Bay No. 2 <i>Space includes:</i> <ul style="list-style-type: none"> • Length and width of a rescue truck and ambulance in tandem • 5-feet of clearance on all sides of vehicles • 50 lf of space along the length of one side walls for workbenches, storage cabinets, equipment, etc. 	1	1,170	1,170	Drive-through access	125	\$ 146,250
Apparatus Bay No. 3 <i>Space includes:</i> <ul style="list-style-type: none"> • Length and width of an SUV and a Mass Casualty Response Unit in tandem • 5-feet of clearance on all sides of vehicles • 50 lf of space along the length of one side walls for workbenches, storage cabinets, equipment, etc. 	1	800	800		125	\$ 100,000
Medical Oxygen Bottle Room	1	150	150		150	\$ 22,500
Medical Supplies	1	150	150		150	\$ 22,500
Medical Equipment	1	150	150		150	\$ 22,500
Archives	1	150	150		135	\$ 20,250
Apparatus Bay Storage	1	200	200		110	\$ 22,000
Decontamination Room	1	100	100	For biological decontamination	250	\$ 25,000
					125	
					\$	- \$ 527,250

FIRE DEPARTMENT BUILDING

RESCUE SQUAD CONT.)

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
SECOND FLOOR SPACES						
Business Office <i>Space includes:</i> <ul style="list-style-type: none"> • 4 computer workstations • Dispatch desk (5 lf) • 3 lateral files • Copy, fax, printers • Administrative supplies storage 	1	300	300	Open office work area concept.	150	\$ 45,000
Ready Room	1	240	240	Can act as conference room for offices.	150	\$ 36,000
Training Room	1	1,300	1,300	Linear table seating for 50 persons.	135	\$ 175,500
Ladies Auxiliary Storage	1	150	150		110	\$ 16,500
Lounge <i>Space includes:</i> <ul style="list-style-type: none"> • Refreshment counter • Seating areas • Television viewing • Historical memorabilia displays • Trophies and awards displays 	1	500	500		120	\$ 60,000
Men's toilet room	1	50	50	Associated with Lounge	325	\$ 16,250
Women's toilet room	1	50	50	Associated with Lounge	325	\$ 16,250
Area Subtotal			6,630			
Circulation Factor	15%		995		125	\$ 124,313
Net Square Feet - Rescue Squad			7,625			\$ 1,017,063
Gross Square Feet - Rescue Squad			9,683			\$ 1,291,669

FIRE DEPARTMENT BUILDING

MAINTENANCE

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
GROUND FLOOR SPACES						
Apparatus Maintenance Bay <i>Space includes:</i>	1	1,700	1,700		125	\$ 212,500
<ul style="list-style-type: none"> • Length and width of longest vehicle • 5-feet of clearance on all sides of vehicle • Retractable Hanna truck wash at one end of bay • 40 lf of space along the length of two side walls for workbenches, storage cabinets, equipment, etc. 				Drive-through access		
Maintenance Bay Storage	1	600	600	Can be divided into multiple locations	125	\$ 75,000
Vehicle Storage Bay <i>Space includes:</i>	1	1400	1,400	Drive-through access	125	\$ 175,000
<ul style="list-style-type: none"> • Bucket truck, SUV and boat in tandem • 5-feet of clearance on all sides of vehicle • 30 lf of space along the length of one side wall for workbenches, storage cabinets, equipment, etc. 						
SCBA Room <i>Space includes</i>	1	120	120	Accessible to firemen	150	\$ 18,000
<ul style="list-style-type: none"> • Compressor unit • 6 lf layout bench 						
Lube Storage <i>Space includes</i>	1	160	160	Enclosed room off of Maintenance Bay	125	\$ 20,000
<ul style="list-style-type: none"> • Drums of lube and oil • Equipment for lube/oil distribution 						
Extinguisher Storage	1	80	80		125	\$ 10,000
Clean Repair Room	1	100	100		125	\$ 12,500
Hose Maintenance <i>Space includes</i>	1	800	800	Tower to accommodate rappelling	160	\$ 128,000
<ul style="list-style-type: none"> • Hose drying tower with 20x20 footprint • Hose washer • Hose maintenance space • Chemical storage • Hose storage 						

FIRE DEPARTMENT BUILDING

MAINTENANCE (CONT.)

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
Parking Meter Repair <i>Space includes</i> <ul style="list-style-type: none"> • 10 lf workbench • Tools and equipment storage • Meter storage • 15 sf vault for meter money, keys, etc. 	1	300	300		150	\$ 45,000
Laundry <i>Space includes</i> <ul style="list-style-type: none"> • 3 commercial washers, 3 commercial dryers • 20 lf of turnout hanging space • 10 lf of layout table 	1	500	500	Accessible to firemen and rescue squad	225	\$ 112,500
Decontamination Room	1	64	64	From exterior to Laundry	250	\$ 16,000
Maintenance Office <i>Space includes</i> <ul style="list-style-type: none"> • Two office workstations • Reference and manual shelving • Two filing cabinets • Copy, fax • Work table 	1	300	300	Open office concept	150	\$ 45,000
Conference Room	1	240	240	Accommodate 10 persons	150	\$ 36,000
Toilet/Shower/Lockers	1	150	150	1 WC, 1 lav, 1 shower, 4 lockers	325	\$ 48,750
Area Subtotal						6,514
Circulation Factor					20%	1,303
					125	\$ 162,850
Net Square Feet - Maintenance						7,817
Gross Square Feet - Maintenance						9,927
					\$ 1,117,100	142.91
					\$ 1,418,717	142.91

FIRE DEPARTMENT BUILDING

BUILDING SUPPORT SPACES

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
GROUND FLOOR SPACES						
Building Entry	1	300	300		275	\$ 82,500
Public Toilets	2	100	200	Men and women facilities in Building Entry	325	\$ 65,000
SECOND FLOOR SPACES						
Multi-Purpose Room	4	600	2,400	Separated by operable walls	150	\$ 360,000
Kitchen	1	200	200	Associated with Multi-Purpose Room	350	\$ 70,000
Kitchen Storage	4	50	200	One for each company	130	\$ 26,000
Conference Room	1	400	400	22 seats at table, 8 seats against wall	150	\$ 60,000
Conference Room	1	250	250	12 seats at table	150	\$ 37,500
Headquarters Room	1	320	320	Office space for 5 persons	150	\$ 48,000
Communications and Dispatch	1	100	100	Can be part of the Headquarters Room	500	\$ 50,000
Exercise Room	1	1,200	1,200		130	\$ 156,000
Showers/Lockers/Toilets	1	400	400	3 showers, 100 6"x36" lockers	325	\$ 130,000
Dormitory	1	1,000	1,000	Space for 20 cots and cot storage	125	\$ 125,000
Area Subtotal			6,970			
Circulation Factor	20%		1,394		125	\$ 174,250
Net Square Feet - Building Support Spaces			8,364			\$ 1,384,250 165.50
Gross Square Feet - Building Support Spaces			10,622			\$ 1,757,998 165.50

PUBLIC SAFETY BUILDING

AREA SUMMARY

	Net Square Feet	Total Net Square Feet		Back-Up Date on Page(s)
POLICE DEPARTMENT		14,465		14 through 22
Dispatch / Reception	976		200 \$ 195,120	14
Chief of Police	948		150 \$ 142,200	15
Records Bureau	494		150 \$ 74,160	16
Patrol Bureau	2,088		200 \$ 417,600	17
Detectives Bureau	1,206		200 \$ 241,200	18
Evidence Bureau	948		250 \$ 236,900	19
Booking / Holding	1,176		150 \$ 176,400	20
Emergency Management	1,856		200 \$ 371,280	21
Department Support Spaces	4,773		150 \$ 715,875	22
MUNICIPAL COURT		2,316	250 \$ 579,000	23
VIOLATIONS DEPARTMENT		1,116	160 \$ 178,480	24
BUILDING SUPPORT SPACES		1,320	150 \$ 198,000	25
Total Net Square Feet		19,216		
Net-to-Gross Area Factors				
Mech/Elec/Comm	0.12	2,306	125 \$ 288,240	
Structure and Walls	0.09	1,729	125 \$ 216,180	
General Circulation	0.06	1,153	125 \$ 144,120	
TOTAL GROSS SQUARE FEET PUBLIC SAFETY BUILDING		24,404	\$ 4,174,755	NOTE: This estimate does not reflect Contingency, Soft Costs and Escalation Factors. See Tab 5 for complete estimate

PUBLIC SAFETY BUILDING - POLICE DEPARTMENT

DISPATCH / RECEPTION

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks
Reception Area <i>Space includes</i> <ul style="list-style-type: none"> • Visitors seating for four • 6 lf of display cabinets on one wall • Public pay telephone 	1	200	200	Off of Building Entry 200 \$ 40,000
Fingerprinting <i>Space includes</i> <ul style="list-style-type: none"> • 4 lf of bench for 10-print cards 	1	20	20	4 lf bench for 10-print card 150 \$ 3,000
Public Toilet Room	2	60	120	Separate men and women facilities 325 \$ 39,000
Dispatch Center <i>Space includes</i> <ul style="list-style-type: none"> • 2 dispatch workstations • 5 lf coffee bar with sink 	1	300	300	5 lf counter with sink 160
Equipment Room	1	50	50	For communications/dispatch equipment 135 \$ 6,750 \$ -
Service Counter <i>Space includes</i> <ul style="list-style-type: none"> • Service counter to Reception Area • Storage for forms, brochures, etc. 	1	48	48	6 lf bullet-resistant transaction counter 220 \$ 10,560
Dispatch Storage Closet	1	15	15	Miscellaneous storage 110 \$ 1,650
Dispatch Toilet Room	1	60	60	Unisex 325 \$ 19,500
Area Subtotal			813	
Circulation Factor	20%		163	125 \$ 20,325
Net Square Feet - Dispatch / Reception			976	\$ 140,785 144.31

PUBLIC SAFETY BUILDING - POLICE DEPARTMENT

CHIEF OF POLICE

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
Chief's Office	1	300	300	Private office	175	\$ 52,500
Chief's Washroom	1	50	50		325	\$ 16,250
Waiting Area <i>Space includes</i> <ul style="list-style-type: none"> • Seating for four • 5 lf coffee bar 	1	100	100		160	\$ 16,000
Secretary	1	140	140		150	\$ 21,000
Conference Room	1	200	200	Seating for 12	150	\$ 30,000
Area Subtotal			790			
Circulation Factor	20%		158		125	\$ 19,750
Net Square Feet - Chief's Office			948			\$ 155,500 164.03

PUBLIC SAFETY BUILDING - POLICE DEPARTMENT

RECORDS BUREAU

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks
Records Clerk	1	64	64	Modular workstation open to Svc Counter
Service Counter <i>Space includes</i>	1	48	48	6 lf bullet-resistant transaction counter
<ul style="list-style-type: none"> • Service counter to Reception Area • Storage for forms, brochures, etc. 				
Records Room	1	300	300	
Area Subtotal			412	
Circulation Factor	20%		82	125 \$ 10,300
Net Square Feet - Records Bureau			494	\$ 73,540 148.75

PUBLIC SAFETY BUILDING - POLICE DEPARTMENT

PATROL BUREAU

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks			
Captain's Office	1	210	210	Private office	150	\$	31,500
Lieutenant's Office	1	200	200	Private office	150	\$	30,000
Sergeant's Office	5	150	750	Private office	150	\$	112,500
Report Writing Room	1	100	100	Countertops on 2 walls for four computers	165	\$	16,500
Briefing Room <i>Space includes</i> • Parallel table seating for 16 • 5 lf bench for chargers	1	400	400	Doubles as Training Room	150	\$	60,000
Storage	1	80	80	Equipment and supplies	120	\$	9,600
Area Subtotal			1,740				
Circulation Factor	20%		348		125	\$	43,500
Net Square Feet - Patrol Bureau			2,088			\$	303,600
							145.40

PUBLIC SAFETY BUILDING - POLICE DEPARTMENT

EVIDENCE BUREAU

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks
Evidence Clerk	1	64	64	150 \$ 9,600
Evidence Receiving <i>Space includes</i>	1	150	150	210 \$ 31,500
<ul style="list-style-type: none"> • Space for packaging evidence • Two-way evidence lockers • Refrigerated evidence lockers • Service counter to Evidence Clerk • Property pick-up 				
Evidence Room <i>Space includes</i>	1	450	450	210 \$ 94,500
<ul style="list-style-type: none"> • General storage for property and evidence • Refrigerator/freezers • Flammable storage cabinet 				
Bicycle Storage	1	160	160	40 to 60 bicycles 125 \$ 20,000
Area Subtotal				824
Circulation Factor		15%	124	125 \$ 15,450
Net Square Feet - Evidence Bureau			948	\$ 171,050 180.51

PUBLIC SAFETY BUILDING - POLICE DEPARTMENT

BOOKING / HOLDING

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks
Sally Port	1	400	400	250 \$ 100,000
Booking Room <i>Space includes</i> <ul style="list-style-type: none"> • Cuffing bench • Booking counter • Fingerprinting • Mug shot 	1	180	180	200 \$ 36,000 5 lf 5 lf for 10-print cards
Breathalyzer Room	1	100	100	150 \$ 15,000
In-Custody Toilet Room	1	60	60	325 \$ 19,500
Holding Cells	3	80	240	400 \$ 96,000
Area Subtotal			980	
Circulation Factor	20%		196	140 \$ 27,440
Net Square Feet - Booking / Holding			1,176	\$ 293,940 249.95

PUBLIC SAFETY BUILDING
EMERGENCY MANAGEMENT

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks			
Coordinator's Office	1	200	200		150	\$	30,000
Deputy Coordinator's Office	1	160	160		150	\$	24,000
Emergency Workstations	4	42	168	Open office workstations	130	\$	21,840
Shared Work Table • For workstation occupants • Access all sides	1	104	104	3x8 table	15	\$	1,560
War Room • Accommodate 20 persons • U-shaped conference configuration • Projection and map displays on one or more walls	1	680	680	Can double as a meeting room	165	\$	112,200
Radio Equipment Room	1	100	100		250	\$	25,000
Toilet Rooms • Full bath with six 12"w x 36"h stacked wardrobe lockers	1	120	120		325	\$	39,000
Storage Closet	1	15	15	Supplies	125	\$	1,875
Area Subtotal							1,547
Circulation Factor				20%			309
Net Square Feet - Emergency Management							1,856
					125	\$	38,675
					\$	294,150	158.45

PUBLIC SAFETY BUILDING - POLICE DEPARTMENT

DEPARTMENT SUPPORT SPACES

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
Interview Room	1	110	110	Soft interview accessible to Reception	150	\$ 16,500
Exercise Room	1	500	500		130	\$ 65,000
Men's Locker Room	1	200	200	30 lockers 18"w x 72"w	250	\$ 50,000
Men's Shower/Toilets	1	160	160		325	\$ 52,000
Women's Locker Room	1	160	160	20 lockers 18"w x 72"w	250	\$ 40,000
Women's Shower/Toilets	1	100	100		325	\$ 32,500
Armory	1	250	250		350	\$ 87,500
Laboratory <i>Space includes</i> <ul style="list-style-type: none"> • Bench space for dusting, cyanoacrylate, chemical processing, alternate light • Chemical fume hood • Laboratory safety station • Evidence layout and triage • AFIS Terminal 	1	300	300		450	\$ 135,000
Mail Room	1	80	80		170	\$ 13,600
Temporary Storage	1	100	100		125	\$ 12,500
General Storage	1	500	500		125	\$ 62,500
Supplies Storage	1	150	150		125	\$ 18,750
Men's Toilet Room	1	120	120	On second floor	325	\$ 39,000
Women's Toilet Room	1	120	120	On second floor	325	\$ 39,000
Firing Range	1	1,150	1,150	Proficiency range, 2- lane, 25-yards	125	\$ 143,750
Firearms Simulation Training Room	1	150	150		300	\$ 45,000
Area Subtotal			4,150			
Circulation Factor	15%		623		125	\$ 77,813
Net Square Feet - Department Support Spaces			4,773			
					\$ 930,413	194.95

PUBLIC SAFETY BUILDING

MUNICIPAL COURT

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
Courtroom	1	600	600		400	\$ 240,000
Prefunction Area	1	200	200		200	\$ 40,000
Judges Chambers	1	250	250		250	\$ 62,500
Conference Room	1	300	300	Accommodate 12 persons	185	\$ 55,500
Court Clerk's Office	1	180	180		160	\$ 28,800
Break Room	1	200	200	Vending machines, coffee, seating	150	\$ 30,000
General Storage	1	100	100		125	\$ 12,500
Archive Storage	1	100	100		125	\$ 12,500
Area Subtotal						1,930
Circulation Factor				20%		386
Net Square Feet - Municipal Court						2,316
					125	\$ 48,250
					\$ 530,050	228.86

PUBLIC SAFETY BUILDING

VIOLATIONS DEPARTMENT

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks		
Reception Area <i>Space includes</i> <ul style="list-style-type: none"> • 6 lf secure service counter • Standing space for 6 	1	150	150		180	\$ 27,000
Violations Supervisor	1	180	180		150	\$ 27,000
Violations Clerks <i>Space includes</i> <ul style="list-style-type: none"> • 3 open office workstations • Violations files • Floor safe • References 	1	400	400		175	\$ 70,000
Break Room	1	100	100		150	\$ 15,000
Toilet Room	1	60	60	Unisex	325	\$ 19,500
Storage Room	1	80	80		125	\$ 10,000
Area Subtotal			970			
Circulation Factor	15%		146		125	\$ 18,188
Net Square Feet - Violations Department			1,116			\$ 186,688 167.36

PUBLIC SAFETY BUILDING

BUILDING SUPPORT SPACES

Space/Equipment	Quan Space	Unit Area	Space Total	Remarks
Building Entry	1	400	400	500 \$ 200,000
Men's Public Toilet Room	1	200	200	325 \$ 65,000
Women's Public Toilet Room	1	200	200	325 \$ 65,000
Shipping/Receiving	1	200	200	200 \$ 40,000
General Building Storage	1	200	200	125 \$ 25,000
Area Subtotal			1,200	
Circulation Factor	10%		120	125 \$ 15,000
Net Square Feet - Building Support Spaces			1,320	\$ 410,000 310.61

DESIGN GUIDELINES

INTRODUCTION

This section of the Needs Assessment defines specific design requirements for this project that are related to space needs and project costs. These design guidelines will address general requirements for the buildings, including site requirements, and specific requirements for each component or entity comprising the buildings in this project.

These guidelines are written with the assumption that this project will consist of two separate buildings. One building will be the Fire Department Building and the other building will be the Public Safety Building. Components or entities of each of these building are:

FIRE DEPARTMENT BUILDING

- Lincoln Hose Company
- Hook and Ladder Company
- Rescue Squad
- Maintenance

PUBLIC SAFETY BUILDING

- Somerville Police Department
- Municipal Court
- Violations Department

These guidelines will address site issues, architectural, structural, mechanical and electrical design issues, and will include guidelines for each building and each space within each building.

SITE REQUIREMENTS - FIRE DEPARTMENT BUILDING

1. Parking Security. It is recommended that the site design provide two levels of security for vehicle parking. These security levels are as follows:
 - a. Level 1, Unsecured. This would be for visitor and staff parking, and should allow visitors and staff to enter and leave the parking area without security barriers.
 - b. Level 2, Partially Secured. This parking area should be fenced, and would be used by people having business at the facility. Access to shipping/receiving, dumpster removal, and other vendors requiring access. Access to this parking area may be through the Level 1 parking area. It is considered “partially” secured, because it should be gated, with the gate left open during working hours, and locked after hours. This parking area would also be used to park vehicles overnight that will not be parked inside the building, which will include at least two vehicles for the Maintenance Unit.
2. Site Access. The site should be designed to allow fire and rescue apparatus to enter the site, drive to the rear of the building, enter the rear of the apparatus bays, and exit from the front of the apparatus bays. Two means of access to the site will not be required since, as a worst case, apparatus could back into the front of the vehicle bays in the event that the site access is blocked due to traffic accidents, street maintenance, acts of sabotage, or other reasons.
3. Site Lighting. Although the facility will not be occupied 24-hours per day, adequate lighting should be provided throughout the site to deter vandalism and help maintain security. All areas of the site, not only the parking areas, should be well lighted. Wall washes should be used on the exterior of the building, and path lighting should be provided.
4. Radiant Heat Concrete Pads. Concrete pads on exterior of building should be designed with radiant heat coils for snow melting.

SITE REQUIREMENTS - PUBLIC SAFETY BUILDING

1. Parking Security. It is recommended that the site design provide four levels of security for vehicle parking. These security levels are as follows:
 - a. Level 1, Unsecured. This would be for visitor and staff parking, and should allow visitors and staff to enter and leave the parking area without security barriers.
 - b. Level 2, Partially Secured. This parking area should be fenced, and would be used by people having business at the facility. Access to shipping/receiving, dumpster removal, and other vendors requiring access. Access to this parking area may be through the Level 1 parking area. It is considered “partially” secured, because it should be gated, with the gate left open during working hours, and locked after hours.
 - c. Level 3, Secured. The police motor court should be considered Level 3 parking. This should be used for patrol vehicles, parking for detectives, and parking for other special police vehicles, such as SWAT, bomb squad, and crime scene vehicles. Sally port access should be gained from within the Level 3 parking. Judges and Municipal Court staff should also park in a Level 3 parking area, although separate from the police motor court. Level 3 parking should be in a fenced enclosure, secured 24 hours per day, and with controlled access, such as an electronic proximity access device.

- d. Level 4, Secured and Monitored. Vehicles or other large items, such as boats or trailers, which have been impounded as evidence should be stored in this area. It should include a security fence with limited access, and should be electronically monitored with security devices such as closed circuit television (CCTV) and/or intrusion detection.
2. Site Access. This portion of the site should be designed with access provided from at least two separate locations. This is required in order to ensure access to the site despite potential traffic accidents, street maintenance, or acts of sabotage, and also to maximize the free flow of traffic to and from the site.
3. Site Lighting. The building should be well lighted 24-hours per day. Adequate lighting should be provided throughout the site to deter vandalism and help maintain security. All areas of the site, not only the parking areas, should be well lighted. Wall washes should be used on the exterior of the building, and path lighting should be provided.
4. Landscaping. Landscaping should be designed to enhance security. Dense shrubbery should be avoided within 10 feet of the building, large clusters of high shrubbery should be avoided throughout the site, and tall evergreens with branches lower than 5 feet above grade should not be used. Landscaping should be designed to prevent someone from hiding on the site until after dark, or planting explosives near the building.

GENERAL BUILDING DESIGN REQUIREMENTS - FIRE DEPARTMENT BUILDING

1. Essential Facility. The building Fire Department Building should be designed structurally and architecturally to meet essential facility requirements in accordance with applicable building codes and ordinances.
2. Exterior Walls. Exterior wall materials should be durable and compatible with local environmental conditions.
3. Access System. Standard keyed access devices are satisfactory for most of the spaces in this building. Overhead access doors for apparatus at the rear of the building should be remote controlled from the apparatus, in addition to local control. Overhead exit doors for apparatus in the front of the building shall be either automatically or manually controlled from the fire and rescue dispatch center, in addition to local control.
4. Emergency Power. In the event of a primary power source failure an emergency generator should be installed to provide 100% power and lighting for this entire building.

GENERAL BUILDING DESIGN REQUIREMENTS - PUBLIC SAFETY BUILDING

1. Essential Facility. The building Police Department portion of the building should be designed structurally and architecturally to meet essential facility requirements in accordance with applicable building codes and ordinances. If a clear vertical separation of the Police Department spaces from Municipal Court and Violations Department spaces cannot be achieved in the design of the building, then the entire building should comply with essential facility requirements.
2. Exterior Walls. Exterior wall materials should be bullet-resistant. Concrete or masonry is preferred.
3. Exterior Windows. Ground floor window sill height should be minimum 4'-4" above grade in order to protect seated occupants from sniper fire. As an alternative to this sill height, a layer of bullet-resistant glazing should be applied to ground floor windows. Window glazing should be sufficiently reflective to prevent

viewing into the building from the exterior. Window frames at the sill should not project more than 1-3/4" (preferably less) from the exterior face of the glass. If windows are to be recessed, the sills at the exterior should slope down at 45-degrees minimum in order to prevent the placement of explosives next to the window.

4. Access System. It is recommended that the police facilities be equipped with a monitored electronic proximity access system. Proximity access devices should be located to allow authorized persons to enter secured spaces from public spaces. Additional restricted access devices should be installed for access to high security spaces, such as evidence storage spaces and armories.

Electronic access systems need not be installed for the Municipal Court or Violations Department spaces. Standard keyed lockset devices are satisfactory.

5. Emergency Power. In the event of a primary power source failure an emergency generator should be installed to provide 100% power and lighting for the entire Police Department component of the building. The remainder of the building shall be provided with standard emergency egress power and lighting as required by applicable building codes and ordinances.
6. Uninterruptible Power Supply (UPS). UPS power shall be provided to the Police Department dispatch equipment and other computer controlled equipment.

SECURITY SYSTEM REQUIREMENTS

1. Security Strategy. A comprehensive security strategy for the site and the buildings on the site cannot be finalized until the schematic design phase of this project. Comprehensive security strategy must be customized for each project based on its site design and building floor plans. However, this Needs Assessment will establish guidelines for estimating security needs, which may be modified when building floor plans have been developed.
2. Site Security. Pan/tilt/zoom CCTV cameras should cover all areas of the site, including parking lots, site access and egress, sidewalks, and pathways. Intrusion detection should be equipped on all security fences and gates.
3. Exterior Building Security. Site security CCTV cameras should have the capability of covering the exterior walls of both buildings. Exterior doors for both buildings should include monitored door status devices.
4. Interior Building Security
 - a. CCTV Surveillance. CCTV cameras should be installed to cover the following areas:
 - (1) Entrance to the Police Department and Municipal Court, with coverage on the backs of persons entering the building. (May be a common entry for the Police Department and Municipal Court.)
 - (2) Sally port.
 - (3) Booking areas.
 - (4) Evidence receiving spaces.
 - (5) Exterior doors (site CCTV may cover these doors)
 - b. Motion Detection. Motion detectors, to be activated after working hours, should be installed in high-security storage areas, such as storage spaces for narcotics, cash, jewelry, or other valuable evidence.

- c. Metal Detectors. Include provisions for the installation of metal detectors and/or x-ray machines at the entries of the Police Department and the Municipal Court.
5. Security Monitoring. Security monitoring for electronic security devices, including CCTV, motion detectors, and door status monitors, shall be monitored in the dispatch center of the Police Department.

SPACE REQUIREMENTS - FIRE DEPARTMENT BUILDING

1. Apparatus Bays.
 - a. Materials. Construction of bays for fire and rescue apparatus, including all apparatus bay storage rooms, should consist of solid, durable materials, such as concrete masonry units (CMU).
 - b. Overhead Doors. 12-feet wide x 14-feet high, minimum.
 - c. Ceilings. Exposed structure, 14-feet clear.
 - d. Finishes. Sealed concrete floors, cleanable wall finishes such as epoxy paint.
 - e. Lincoln Hose Company Only. Provide 3-inch diameter hose fill-up.
 - f. Exhaust Hose. Provide quick-release apparatus exhaust hose connection for each apparatus vehicle.
 - g. Compressed Air. Quick-connect compressed air connections in each apparatus bay. Minimum two per bay, except minimum four in the maintenance bay.
2. Second Floor Spaces. Includes lounges, offices, toilet rooms, training rooms, multi-purpose rooms, kitchen, conference rooms, communications and dispatch, exercise rooms, showers, lockers and dormitories.
 - a. Materials. Gypsum board on wood or metal studs with appropriate finishes for kitchen, showers, locker rooms, toilet rooms, and other special finish spaces as noted in this section.
 - b. Doors. Hollow metal doors in hollow metal frames, 3-feet x 7-feet, unless special access requires oversized or double doors.
 - c. Ceilings. Suspended acoustical or gypsum board, 8-feet to 10-feet clear depending of area of space.
 - d. Finishes. Appropriate architectural finishes for intended use.

SPACE REQUIREMENTS - POLICE DEPARTMENT

1. General Design Requirements. All spaces, except as otherwise noted in this section, should be designed as standard office space in terms of materials and finishes. This includes reception areas, offices, toilet rooms, training rooms, briefing rooms, conference rooms, interview rooms, communications and dispatch, exercise rooms, showers, lockers and storage rooms.
 - a. Materials. Gypsum board on wood or metal studs with appropriate finishes for toilet rooms, showers, locker rooms, and other special finish spaces as noted in this section.

- b. Doors. Hollow metal doors in hollow metal frames, 3-feet x 7-feet, unless special access requires oversized or double doors.
 - c. Ceilings. Suspended acoustical or gypsum board, 8-feet to 10-feet clear depending of area of space.
 - d. Finishes. Appropriate architectural finishes for intended use.
2. Corridors. Corridors should be 6-feet wide minimum with durable wainscot.
 3. Reception Area. Must have service/transaction access to dispatcher and records clerk. Access to any other spaces within the department shall be by escort only through secure doors.
 4. Dispatch Center
 - a. Computer Floor. Dispatch workstations should be installed over accessible computer floor system.
 - b. Service Counter. Bullet-resistant service transaction counter for dispatcher to deal with walk-in public.
 5. Records Clerk. Bullet-resistant service transaction counter for dispatcher to deal with walk-in public.
 6. Interview Room. Hard interview room in Detectives Bureau must be designed as follows:
 - a. Hard ceiling
 - b. Door swinging outward
 - c. Hidden surveillance camera, monitoring location to be determined
 7. Evidence Room. Perimeter walls must extend to the structure above to create a secure enclosure.
 8. Sally Port. Can be a chain-link enclosure within the Level 3 parking area. Provide with automatic vehicle doors with drive-through capability. Sally port shall have direct access to the booking and short-term holding area.
 9. Booking and Holding Areas. Design and construct to corrections standards. Walls should be CMU, washable finish (epoxy paint, or equal), hard ceilings, institutional plumbing and light fixtures.
 10. Armory. CMU enclosure with suspended steel plate ceiling. Gypsum board, plywood, and wood furring on walls and ceiling. Armorer's bench with compressed air and sink.
 11. Laboratory
 - a. Laboratory grade casework, including cabinets, countertops, fixtures and fittings
 - b. Triple-chamber cyanoacrylate cabinet
 - c. Chemical fume hood
 - d. Finishes
 - (1) Floors: Chemical-resistant, welded-seam resilient flooring
 - (2) Walls: Epoxy paint
 - (3) Ceilings: Standard acoustical grid and tiles
 12. Firing Range

- a. Total enclosure of 8-inches concrete or fully-grouted concrete masonry units
- b. Wet system bullet trap
- c. Proficiency shooting booths
- d. Programmable, retractable target system
- e. Reverberation insulation
- f. Safety baffles and deflectors
- g. Laminar flow exhaust to comply with OSHA performance criteria
- h. Range master's control booth

SPACE REQUIREMENTS - MUNICIPAL COURT

1. Lobby. Shall accommodate metal detectors and security x-rays.
2. Judge's Chambers. Provide private access and direct access to judges bench in court room.
3. Courtroom
 - a. Judge's bench shall be raised to allow judge while sitting to look down on attorneys standing.
 - b. Design for non-jury trials.

SPACE REQUIREMENTS - VIOLATIONS DEPARTMENT

1. Standards. Design as standard office space.
2. Vault. Allow space for a double-door, floor model vault in the Supervisor's Office.

5. PRELIMINARY COST ESTIMATES

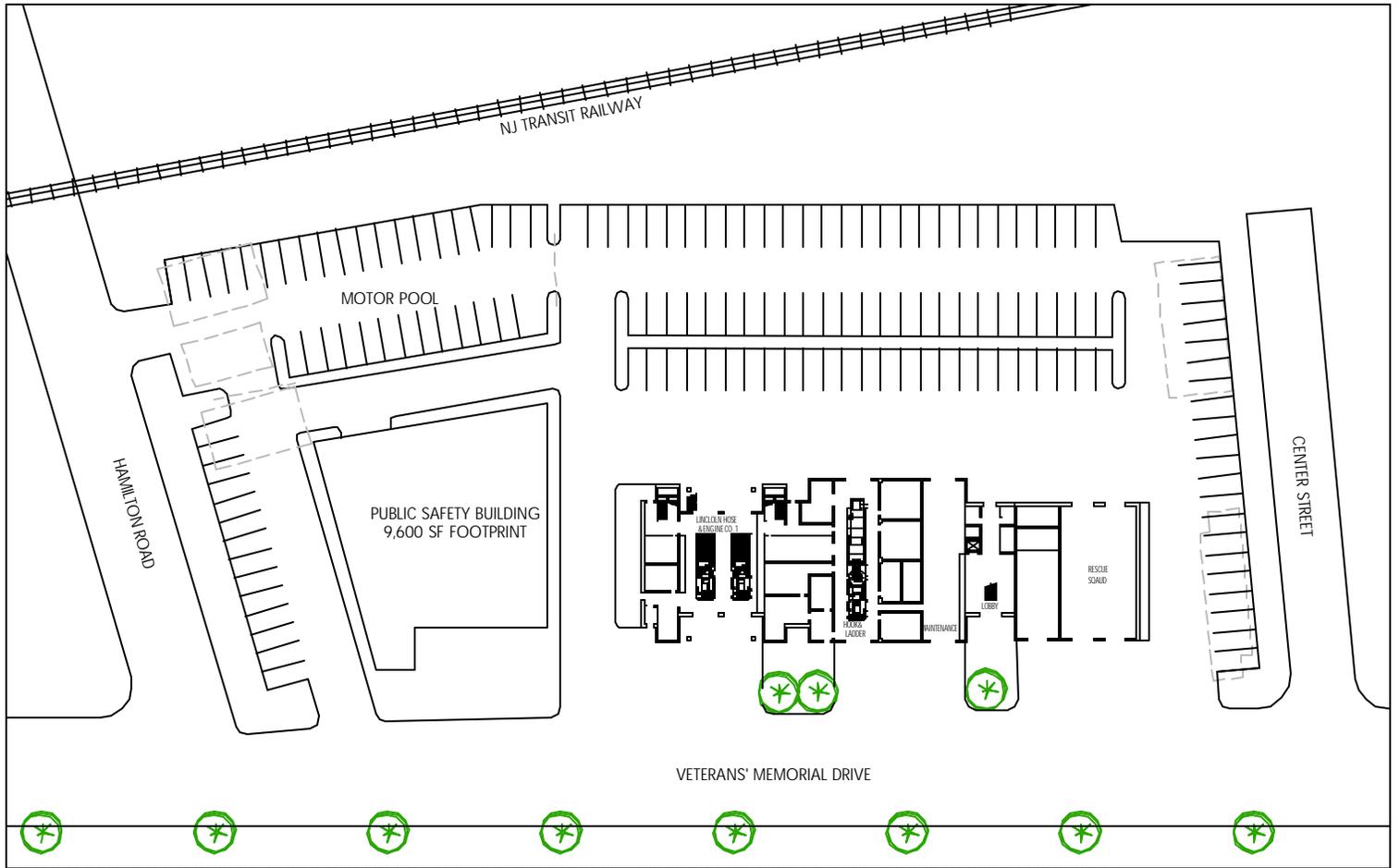
FIRE DEPARTMENT BUILDING

Lincoln Hose Company	3,476 Square Feet	\$489,108
Engine Company No. 1	3,301 Square Feet	\$467,201
Hook and Ladder Company	4,691 Square Feet	\$630,383
Rescue Squad	9,683 Square Feet	\$1,291,669
Maintenance	9,927 Square Feet	\$1,418,717
Building Support Spaces	10,622 Square Feet	\$1,757,997
ESTIMATED CONSTRUCTION COST		\$6,055,000
4% Design Contingency		\$242,200
2% Escalation		\$125,944
10% Soft Costs		\$642,314
6% Construction Contingency		\$377,832
TOTAL		\$7,443,290

PUBLIC SAFETY BUILDING

Police Department	14,465 Square Feet
Municipal Court	2,316 Square Feet
Violations Department	1,116 Square Feet
Building Support Spaces	1,320 Square Feet

ESTIMATED CONSTRUCTION COST	\$4,175,000
4% Design Contingency	\$167,000
2% Escalation	\$86,840
10% Soft Costs	\$442,884
6% Construction Contingency	\$265,730
TOTAL	\$5,138,000



PROPOSED SOMERVILLE EMERGENCY SERVICES COMPLEX - VETERANS' MEMORIAL DRIVE OPTION REVISED

RESOLUTION FOR MASTER PLAN AMENDMENT

WHEREAS, the Planning Board of the Borough of Somerville has adopted a Master Plan for the Borough;

WHEREAS, the Planning Board has, from time to time, reviewed and amended said Master Plan;

WHEREAS, the Planning Board has determined that there is a significant need in the Borough to provide for a unified, coherent, cohesive and consistent plan for emergency services throughout the Borough;

WHEREAS, the Borough retained the services of SSP Architectural Group to analyze the current Emergency Services facilities of the Borough and to recommend a plan for current and future needs of the Borough's emergency services facilities;

WHEREAS, SSP Architectural Group did prepare a report entitled "SOMERVILLE EMERGENCY SERVICES FACILITIES ANALYSIS AND MASTER PLAN" dated January 20, 2004;

WHEREAS, the Planning Board of the Borough of Somerville has carefully reviewed the report and has held public meetings concerning the report;

WHEREAS, members of the public participated in the discussions at the hearings;

WHEREAS, the report, among other things, designates possible sites within the Borough to construct emergency services facilities;

WHEREAS, the Planning Board has no intention to impose any moratorium, as permitted by law, on any development which may be presented to the Planning Board for any of the sites recommended in said facilities report;

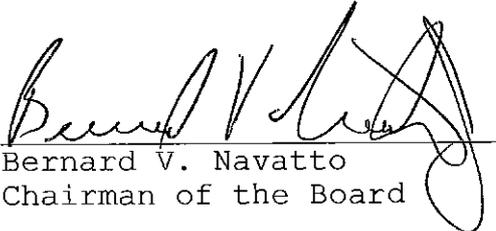
WHEREAS, at a hearing held July 28, 2004, after careful consideration, the Borough of Somerville Planning Board has decided to amend its Master Plan to incorporate the report entitled "SOMERVILLE EMERGENCY SERVICES FACILITIES ANALYSIS AND MASTER PLAN" dated January 20, 2004 prepared by SSP Architectural Group;

WHEREAS, the Board has approved an amendment to the Borough's Master Plan on July 28, 2004, and now seeks to memorialize that action.

NOW THEREFORE, BE IT RESOLVED, that the Planning Board of the Borough of Somerville on this 28th day of July, 2004, does hereby adopt the report entitled "SOMERVILLE EMERGENCY SERVICES FACILITIES ANALYSIS AND MASTER PLAN" dated January 20, 2004 prepared by SSP Architectural Group into its Master Plan. Said report shall be deemed incorporated into the Borough of Somerville Master Plan.

The Master Plan and all its amendments are hereby ratified and reaffirmed as modified by this Resolution.

Certified to be a true copy of a Resolution approved by the Planning Board of the Borough of Somerville at a public meeting held on July 28, 2004 and memorialized on August 25, 2004.


Bernard V. Navatto
Chairman of the Board