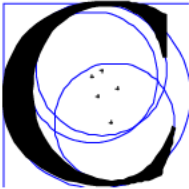
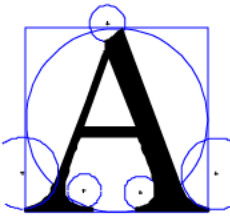


EVALUATION AND ASSESSMENT OF FACILITY AND NEEDS FOR:

***Township of Upper, EMS
2100 Tuckahoe Road
Petersburg, NJ 08270***

 ***obbie***

 ***onley***

 ***rchitect, LLC.***

***PN 24010
July 2024***

***596 Glassboro Road, Woodbury Heights, New Jersey, 08097
Phone: (856) 845-7500 Fax: (856) 853-0528***

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I. OVERVIEW AND DIRECTION

Upper Township, NJ Division of EMS and Robbie Conley Architect LLC have jointly begun analysis of the existing facilities and an assessment of the Division's needs.

The Division of EMS is responsible for answering any calls for medical aid within the 68 square miles of Upper Township. It is staffed 24/7/365 by at least two Emergency Medical Technicians and up to five in the summer. The Division of EMS is funded by Upper Township and employs nine full time EMT's and 18 part time EMT's. The Division of EMS has two ambulances to respond to emergencies. The Division of EMS shares its quarters with the [Upper Township Rescue Squad](#). The Rescue Squad, which is strictly volunteer, is a backup to the Division of EMS should additional ambulances or assets be needed.¹

This endeavor was initiated to evaluate the existing conditions under which the Division has been functioning and to objectively evaluate the constraints under which they are operating. The intention of this analysis is to establish optimum utilization of existing facilities, present immediate needs deficiencies, and to reflect the direction of future growth. To achieve some workable concepts, a program of space and functioning requirements was developed and used as the basis for the conceptual planning. Please keep in mind that these concepts are simply to be used as a preliminary study tool. The actual design process needs to be a dynamic, interactive process. Only as a team can we fully achieve an outcome designed to accommodate the needs of the Division. The goals of the project are maximum community safety and to create a facility to meet the demands of the community well into the future

The following study has been performed to ascertain estimated needs today and to project needs into the future. The information contained in this report was gained from interviews with the building committee. This information was compiled in a spreadsheet to calculate and arrive at a total size requirements for each space. This total was then adjusted for circulation, services, and general spaces to arrive at an overall total square footage to meet the needs of the Rescue Squad.

The existing facilities have been assessed to determine where modifications could be made to accommodate the Division's needs. In addition, the property was documented in order to determine where possible additions could be made.

This Site contains two existing buildings, for EMS operations which are currently the Headquarters for the EMS Division; the facilities are also utilized for ongoing training of Emergency Services Personnel and EMS operations.

¹ Upper Township Website <https://uppertownship.com/public-safety/division-of-ems/>

This report contains conceptual scenarios including reorganizing of existing spaces, additions and modifications to the existing building, as well as an estimated cost of building a new facility.

II. DEFICIENCY REPORT

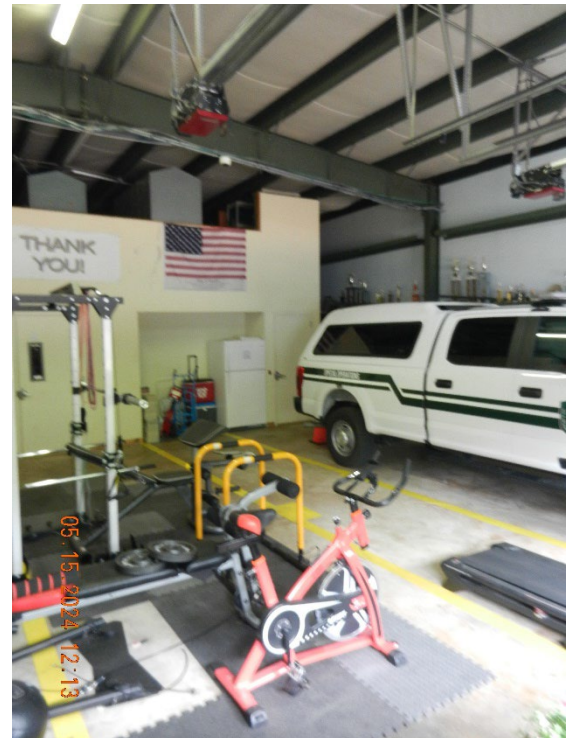
DEFICIENCIES

**Upper Township, NJ EMS Division
2100 Tuckahoe Road
Petersburg, NJ 08270**

This report will be divided into sections showing deficiencies as they pertain to the various operations of this station. The sections will be Operations, Administration, and House. Upon our inspection of this facility on May 15, 2024, the following deficiencies were noted by our staff:

Operations

Ambulance Bays



The Current EMS facility at Upper Township has three vehicle Bays in the main building and a second building that appears to be able to accommodate approximately 4 vehicles. At the time of this study, there was only one Bay in the main building occupied by what seemed to be a Utility vehicle. The second bay was taken over with fitness equipment and the third bay seems to have been converted into a small Storage Area behind the overhead door and the rest of the space taken over by Restroom and Office Space. The Fitness Equipment should be in a location of its own and should be accessible to other Township departments for use. This could be accomplished with an access controlled exterior door.

At the time of our documentation, The Ambulance rigs were housed in the second building, which is detached from the main building and Crew areas by approximately 70 feet. This out building could possibly be used by another department within the Township for storage, but is not adequate for first line emergency vehicles.



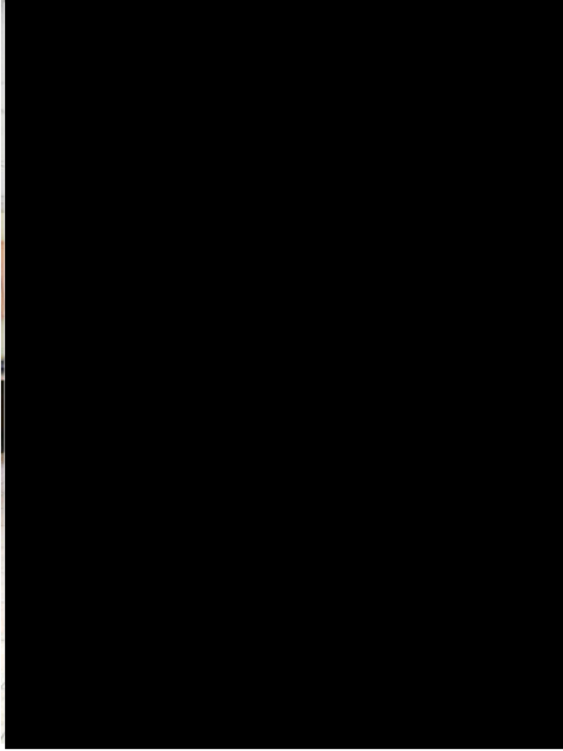
The Bays should be for the housing of vehicles, and should not be cross-utilized to house other operational items and equipment. During an emergency call, the Bays may potentially become unsafe due to the storage of these items. There should be a space in the building specifically for the storage of equipment, and a dedicated Fitness Area if one is provided.

The overhead doors are 12' high, which is minimally adequate. The emergency service apparatus' of today are much larger than they were years ago, when the building was built. The doors and ceiling heights today should be higher to accommodate the growing sizes of present and future apparatus. Today's modern ambulances

are designed with headroom to stand and better treat your patient. The added headroom also increases the safety of the crew members working in the patient compartment.

Watch/Report Room

There is currently a Watch Room / Radio Room immediately inside the front entrance, which is open to a Kitchen/Crew Room. With today's HIPAA laws, it is imperative that a private area be provided for completing confidential reports after calls. This area should be separate from all other areas, so the crew can complete the report and discuss the call in private if necessary.





Maintenance Room

Obviously, the equipment used in the emergency service is designed to save lives. There must be a work area to repair and maintain the equipment to keep it at peak operating efficiency. There is no Maintenance Room in the current facility. Although major may be performed elsewhere, there ought to be a space within the building that is large enough to service small equipment. The area should also contain a sink, work bench and Storage Area to keep things properly organized.

Decontamination Area

Decontamination of hazardous materials is performed at the scene of an incident, but most emergency calls are not considered a HAZMAT incident. Blood borne pathogens and many other contaminants are common at most emergency calls and subsequently are brought back to the Squad building on the clothing and equipment of EMTs. PEOSH requires each organization to have an Exposure Control Plan. Part of that plan is required to address decontamination and cleaning of equipment. The current building does not contain a Decontamination Area. This alone does not meet the requirements of PEOSH. There should be a dedicated area for emergency washing of the face and the body as well as large pieces of equipment such as backboards and slat stretchers. A full shower is also needed, preferably with a handheld shower nozzle. The current facility has a shower in one of the small Restrooms in the rear Office area of the building.

Laundry Room

In conjunction with the Decontamination Area, a Laundry Area is required to wash linens as well as to wash crew members' clothing if they become contaminated. Contaminated clothing should never be taken home and washed in a personal washing machine. There is no Laundry Area in this facility, and future plans should most definitely include one.

Administration

Main Entry

The Administrative portion of the emergency medical service is the entity that deals with the public. As such, it should be professional and inviting to guests. It acts as a buffer zone between the exterior and the main portions of the Station. Currently, entry into the facility is made directly into the Watch Room in the front of the building, or directly into the Crew Area at the side of the building. This affords minimal privacy, and could be a security risk.



Meeting/Training Room

The modern emergency medical service presents many challenges to the men and women who serve in the industry. Frequent training and informational meetings are necessary to effectively deal with the situations that are encountered and to keep up with the ever-changing training. To accomplish this, EMS Stations must be equipped with designated Classroom Areas that provide seating, materials storage and multimedia capabilities. Additionally, there should be an area to spread out training materials as well as separate “Break-Out” areas for further training and instruction. The current Station contains an adequate space that is accessed from the exterior at the front of the building adjacent to the apron. Entering at this point requires walking across the apron directly in front of the vehicle bays, which could be dangerous if an ambulance is exiting the bay to respond to a call. Additionally, the room is open directly to a corridor and the Office area of the building.

All of administrative functions of the Squad require a different amount of focus and noise level. There should be clear physical delineation, or the ability to create such, among these various spaces.



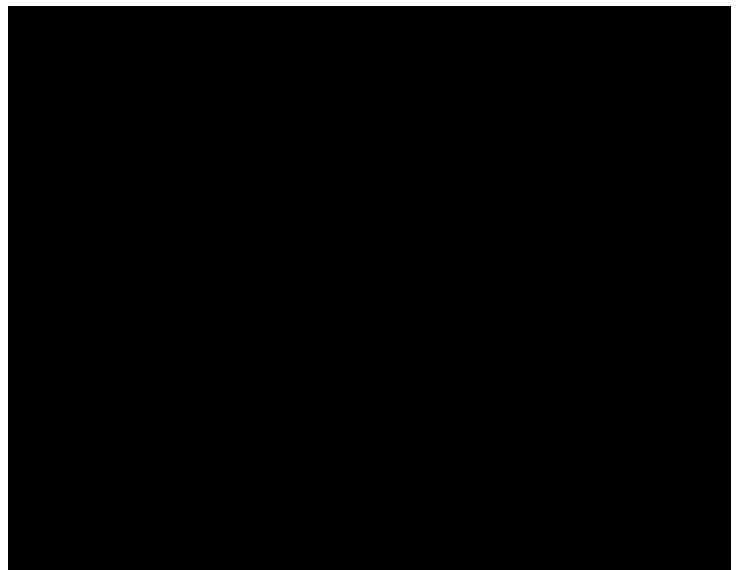


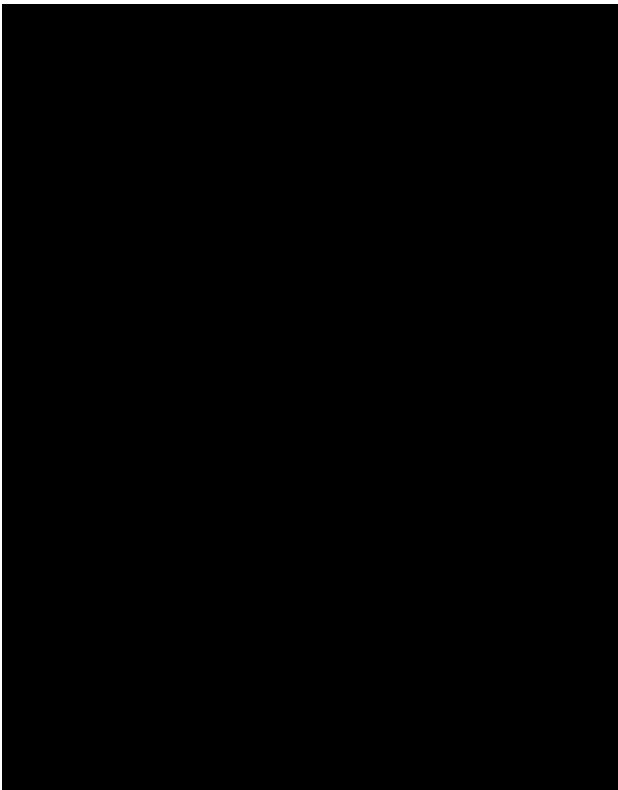
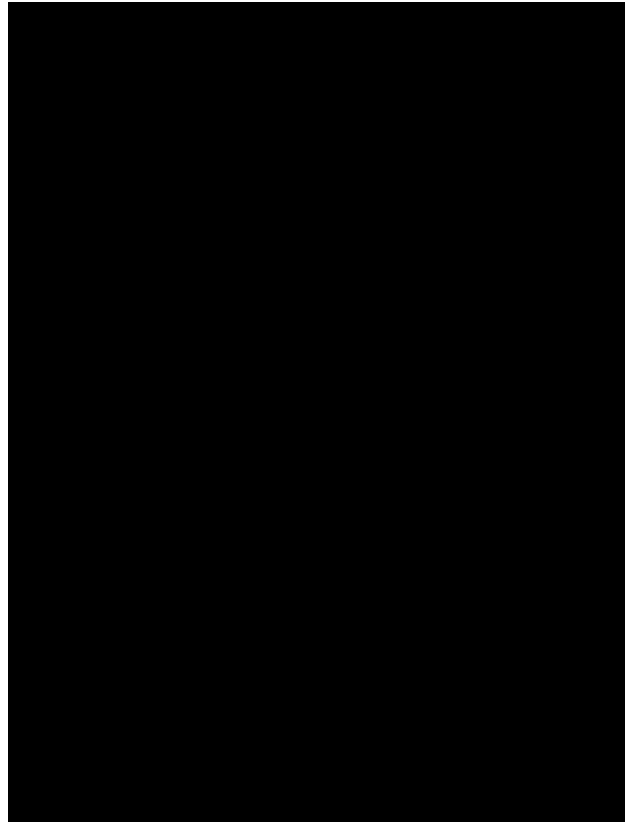
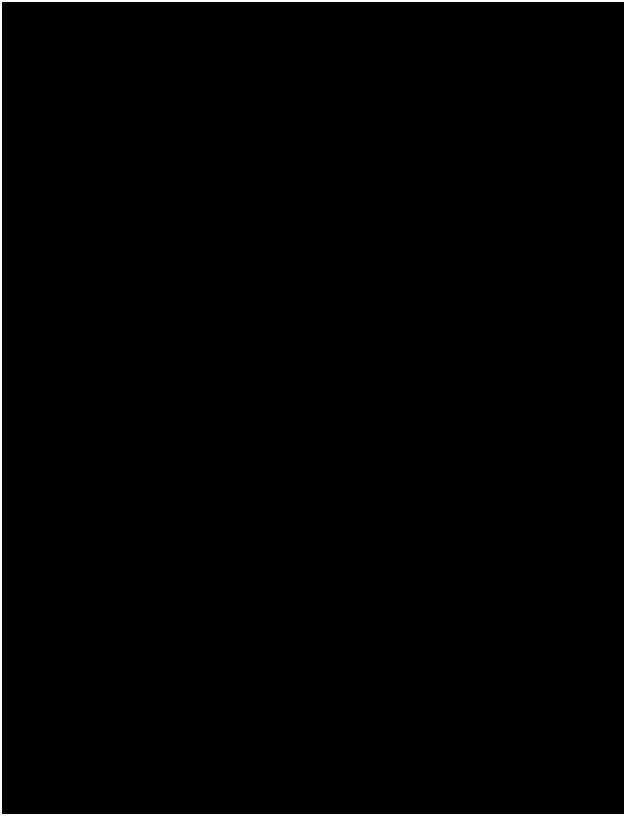
Conference Room

Currently, the Conference Room is contiguous with the Offices in the rear of the building. One must pass through the Conference Room in order to access the Offices, or to access the Meeting/Training Room from the interior of the building. There should be a private room for conferences to discuss pertinent operational procedures, as well as to discuss confidential and secure matters.

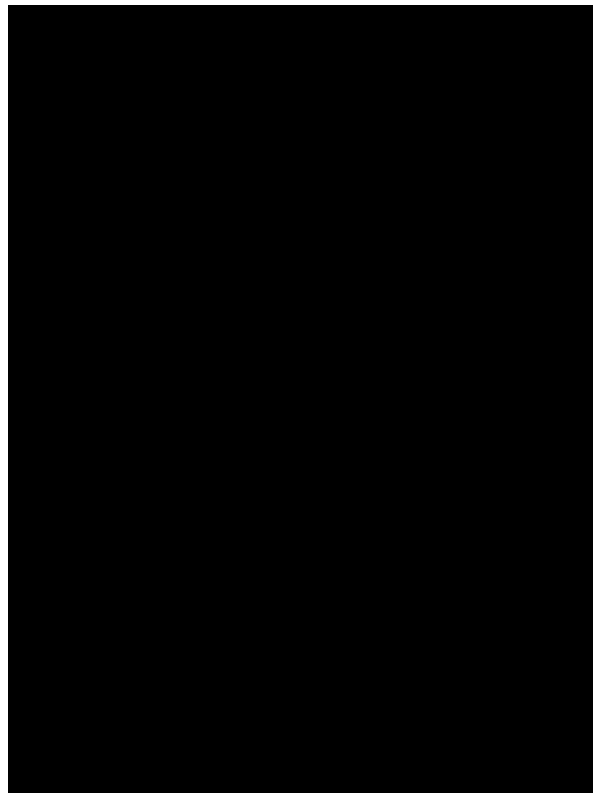
Offices

The Offices of an EMS Building should have enough room for at least two people to work comfortably and efficiently. This area is also often used for storing personnel files and patient care reports, which should be kept secure and confidential. There are currently three small Offices in an Admin area near the rear of the building, two Offices accessed from the vehicle bays and one Office adjacent to the existing Watch Room.





House



Day Room

This is a very important space career members and volunteers. The day room should be a comfortable home-like space. Entertainment through television, pool tables and card tables helps to form camaraderie and a trust within the Station. The Day Room should be large enough to have multiple activities going on at the same time or separate spaces should be provided for these activities. The Day Room in the Upper Township EMS Building provides a comfortable sitting/TV viewing area for 4-6 members, and is adjacent and open to a Kitchen and the Watch Room. The area is an open, multi-use space with a mixed variety of Operational, Administrative and House uses. Anyone entering the Bays or Office areas must traverse through the space. There should be separate areas for eating and utilizing personal computers. Many continuing education programs can be found online, and this is a great resource for staying up to date on industry standards and cutting edge changes. These tasks should not be performed at an eating table, due to possible damage to the computer. Additionally, this is not the ideal atmosphere for learning and research. There should be specific spaces to work, eat, and relax.



Kitchen

In many cases, personnel are required to stay at the Station for extended periods of time. This necessitates an area to prepare meals. The Station has a residential Kitchen, which shares space with the Day Room and is open to the Watch Room as mentioned above. The Kitchen has a table to accommodate approximately 8 people, however, the same table is used for multiple purposes including working and meeting. A photograph of the Kitchen is shown above under Watch/Report Room. By today's codes, facilities such as this require commercial Kitchen equipment. In ambulance squad buildings today, the installation of a residential Kitchen, which lacks a fire suppression (Ansul) system, would only allow the staff to warm foods, and not cook.

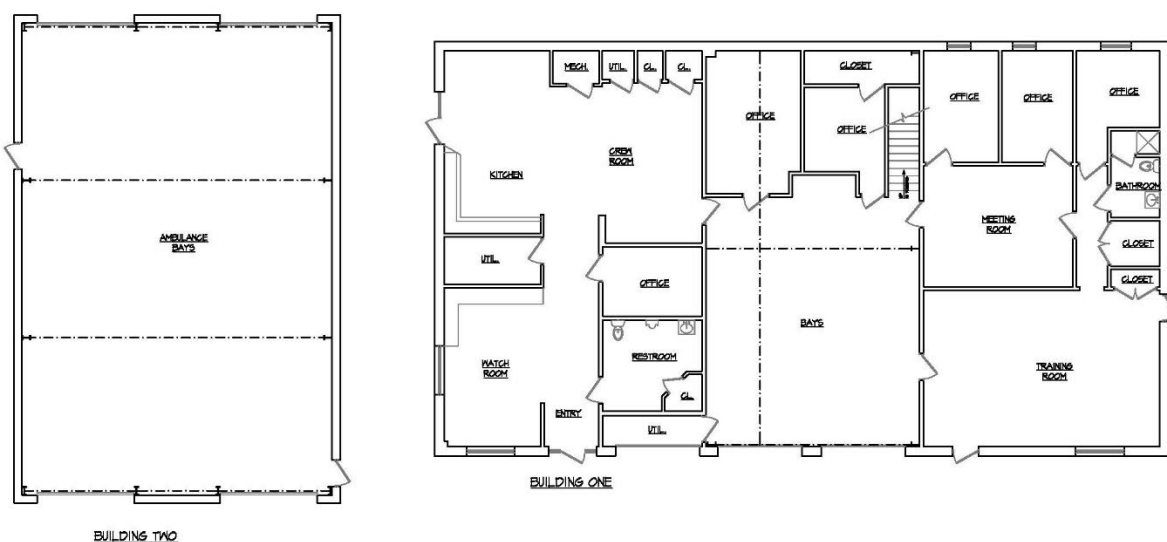
Bunk Rooms

Bunk Rooms are an important part of Ambulance Squad buildings, especially when overnight Duty Crews are used. Additionally, during times of inclement weather, or other disasters, crews are required to remain at the Station for extended periods of time. Sleeping facilities are imperative for members to rest between calls so that they may remain fresh and alert. Currently there are no Bunk Rooms in the Upper Township EMS Building. Those needing rest are would likely have to use the recliners in the Day Room or employ cots in other parts of the building. Bunk Rooms should be considered in any future expansion or remodeling plans.

Bathrooms/Lockers/Showers

PEOSH requires facilities to be provided to prevent exposure of hazardous materials to the rest of the building and for members to shower after exposure to prevent the spread of contamination. Even in strictly volunteer stations without sleeping facilities, showers are required. Additionally, the Construction Code requires buildings with sleeping facilities to have showers. Shower facilities that are provided are required to meet the Barrier-Free Sub Code as well as ADA. Lockers are required for the Members to store additional clothing, uniforms and toiletries for showering. The current building has a single-user toilet rooms in the rear Office Area, which contains a shower. Additionally, there is an overly large single user Toilet Room adjacent to the Watch Room, that does not contain a shower. There are lockers in the loft area behind the ambulance bays, but they are not Barrier Free Accessible, There is no place to change and no Toilet facility, and areas of the loft do not have a code compliant ceiling height.

The facilities within this building are not adequate to meet the minimal code requirements, let alone the recommendations of PEOSH. Proper facilities should be provided for both men and women. Showers are required by the Building Code, and must accommodate barrier-free access. The lack of these facilities is leaving the organization open to liability and could possibly affect the health and safety of the members and their families.



Floor Plans

Exterior Envelope

There are two buildings on site, both of which are pre-engineered steel buildings. These types of buildings usually have a limited lifespan, and most likely would not meet wind and airborne debris requirements if built today. It appears, from our limited observations, that the building is structurally sound, and there were no signs of leaks. However, there is noticeable rust and erosion on the bottoms of some of the panels, specifically on the main building, which is likely older.

The site is situated on an arterial road through the Township.



III. EMERGENCY MEDICAL SERVICES BUILDING DESIGN GUIDELINES

EMS Building Planning

Over the past decade, EMS building planning and design has become increasingly sophisticated and complex. Years of study and experience have made it apparent that by planning an EMS building properly, a safer and quicker turnout can be achieved. This is accomplished primarily by arranging traffic flow patterns within the EMS building to be as direct as possible. The integration of the "primary adjacency" concept for planning the EMS building will reduce turnout time by "grouping" the emergency personnel in the "highest activity" areas of the EMS building. Turnout times along with dispatching time and travel time are three of the key elements in the successful treatment of patients, which is the primary goal of an EMS squad.

The improvements in EMS building planning have created a total upgrading of human comforts with great emphasis on physical fitness. These include recreation spaces, air conditioning, better lighting, well-planned toilet facilities, acoustical improvements, and safety features in building planning.

Space Planning Analysis

It is essential for an architect to perform a space planning analysis for purposes of ascertaining the gross area requirements for the EMS building. A space planning analysis is needed to arrive at the most efficient total gross space required for the building. High building costs have necessitated the use of a space planning analysis to obtain the least gross area for the building function with maximum efficiency. The space planning analysis will perform in-depth studies of equipment, personnel, utility needs, and circulation and arrive at the optimum gross area requirements for the building. Prior to planning an EMS building, it is essential that all equipment and personnel needs are clearly delineated in numbers and size so that proper circulation allowances can be made for the proper functioning of the EMS building; these in turn will give the gross area requirements. As part of the space planning analysis, options will be offered which will examine the level of maximizing or minimizing the space needs and the ultimate advantage and disadvantage of each as they relate to the function of the building.

Ambulance Bays

This is the heart of every EMS building; its location, shape, flexibility, size, layout, and column-free approach will provide for easy, quick access from all areas, in the major concepts of planning an EMS building. This will provide the EMS squads with a good functional design for response purposes. The integration of

the large areas such as the ambulance area and medical storage area into one large, open Ambulance Bay have allowed for "clear space" mobility. The single open space now offers greater flexibility in the ambulance bay area and may also function as an area for training and for storage of spare or down vehicles.

Ambulance bay areas are now being equipped with a sophisticated fume exhaust system. The fume-exhaust system is capable of a massive exhaust pull of 5000 cfm, which is the equivalent of six changes of air per hour. A timer will automatically shut the system down after a set time lapse. A study of fume-exhaust pipe locations on the ambulance will allow us to place intake grilles at optimum locations for greatest intake pull. The goal is for maximum elimination of fume-exhaust gases on the ambulance bay floor. Upon the return of the ambulance to quarters, a manual switch operation can be utilized and the fumes can be exhausted as long as required for the comfort of the personnel.

It is recommended that all Ambulance Bays utilize single overhead doors approximately 12 ft. wide by 12 ft. high, 12 ft. wide by 14 ft. high if heavy rescue apparatus is utilized. Double wide, single-opening overhead doors are not recommended because of the possibility of having the door frozen closed due to a breakdown in the mechanized operation. This situation will put the responding ambulance out of service.

A pair of doors is more functional in that a breakdown in one door will allow another responding ambulance to exit through the other door. This will eliminate the turnout problem in case of an emergency breakdown of one of the mechanized overhead doors. It is essential to include a totalizer on all ambulance doors so that tension springs may be replaced on a preventive maintenance schedule based on predictive breakdown of the equipment. This standardization of door-opening size will simplify the storage of spare parts for repair purposes.

All door operators, springs, track, turning shafts, and other accessory equipment of a single size will simplify the storage of parts while minimizing the inventory burden. It is recommended that all overhead doors be opened with electrical operators for purposes of decreasing the turnout time. Electrical operators shall have the capability of manual operation in case of breakdown of the motorized equipment. It is recommended that the overhead-door-operating equipment be put on an emergency generator in case of electrical failure in the community.

Watch Room

This key communications area is being formed as operating space, completely sound controlled for optimum hearing ability. It must be completely air-conditioned and have maximum visual control of the quarters and street conditions. Glass areas in the front of the house watch are arranged in such a manner that 180' of visibility in front of the EMS building is possible. The alarm lights button at the communications console is not limited to activating the alarm lights as in the past. The alarm button also activates the ambulance bay's fume-exhaust system and a series of floodlights mounted on the front face of the building. These lights illuminate the apron area and street for a safer response.

An adjustable timer turns off the floodlights and the fume-exhaust system after the overhead doors have been electrically secured shut. The personnel, in other than response situations, can activate them manually through an override switch.

Control Functions of the Dispatcher-House watch Area: This key communication area is also the center of all electronic switching devices, which control the security and functioning of the EMS building and include:

1. Gasoline and diesel pump operation.
2. Manual operation of floodlights mounted on the front of the building.
3. Security lights surrounding the problem areas of the building.
4. Manual control of fume-exhaust system.
5. Alarm lights for various parts of the building during response action.
6. Daily-use light control.
7. Control of overhead doors with up and stop buttons only for safety purposes; down button located at overhead door location only.
8. A complete intercom system for immediate verbal communication to all areas of the EMS building.

Decontamination Area

A decontamination area is required due to the recent awareness of hazardous materials including blood borne pathogens. This area needs to be adjacent to the ambulance bays and is an integral part of today's EMS operations. Emergency personnel can come in contact with hazardous materials on any response. The decontamination area is needed to control the flow of hazards into the living areas of the EMS building.

Training Room

The future of all training programs will be in the EMS building through the medium of closed circuit television and videotape. For this purpose a sophisticated space is required in order to create a positive environment for learning. The space will require complete acoustical treatment. The training room should be versatile so it can be set up as a classroom with a desktop writing surface and then also have space for demonstration and practical training.

Recreation Area

This is a very important space especially in volunteer buildings. The recreation area should be a comfortable home-like space. Entertainment through television, pool tables and card tables helps to form a brotherhood and a trust within the department. The recreation area should be large enough to have multiple activities going on at the same time.

Administrative Area

Today's emergency organizations are under greater regulation than ever before. The reports and accountability of training and personnel records necessitates office space within the station. The commanding officer should have an office that can be locked for storage of confidential records and reports. Office space should also be provided for other officers so they can perform ambulance and equipment inspection reports among other duties. A conference room should be provided for private meetings among the officers.

Mechanical Circulation and Support Facilities

The Mechanical/Circulation and Support Area, consists of a generator room, mechanical spaces, janitor's area, storage of supplies, general storage, and circulation needed throughout the building.

Site Needs

Parking Facilities

Parking facilities for the emergency personnel's cars must not be overlooked. The site will need to be large enough to accommodate parking for a minimum of the average number of personnel on duty. There should also be space for a couple of visitor's vehicles unless on street parking is available. Volunteer organizations that have social halls or other fund raising spaces need to accommodate parking for capacity of those spaces in addition to the parking for the emergency personnel.

Apron area

The apron or ramp in front of the bays should be large enough to permit washing of the ambulance and safe entry of the vehicles into traffic. In the ideal situation the site will be large enough to provide pull through bays. In this case, an area equal to the front apron will also be needed in the rear, with enough space to maneuver the vehicles into the building without difficulty. The configuration of the site and the building will dictate the size of the site needed for the new building. It will also dictate if it is possible to have the drive through bays.

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

1. Squad Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
4	Squad Bays	14	35	490	1,960
5	Utility Bays	14	25	350	1,750
1	Oxygen Storage	3	6	18	18
1	Fill Station	3	3	9	9
1	Decon Area	8	10	80	80
1	Medical Storage	10	12	120	120
2	General Storage	10	20	200	400
1	Uniform Storage	8	10	80	80
1	General Storage	8	10	80	80
1	Coat Rack	10	2	20	20
1	Rehab Closet	10	10	100	100
TOTAL NET FLOOR AREA					4,337
Plus Occupant Load:					
4	Occupants	60			240
6	Occupants	15			90
GROSS FLOOR AREA					4,667
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

2. Maintenance Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Work Bench	10	3	30	30
1	Sink	2	2	4	4
2	Shelves	6	2	12	24
2	Tool Box Space	4	2	8	16
1	Air Compressor	3	3	9	9
1	Storage Room	4	8	32	32
TOTAL NET FLOOR AREA					115
Plus Occupant Load:					
1	Occupants	60			60
1	Occupants	15			15
GROSS FLOOR AREA					190
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

3. Watch/ Control Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
2	Work Space	6	2.5	15	30
2	Counter	5	2.5	12.5	25
4	Chairs	2	2	4	16
1	Bulletin Board	4	2	8	8
1	Marker Board	4	3	12	12
1	TV	4	3	12	12
2	File Cabinet	1.5	2	3	6
1	Copier	3	5	15	15
1	Bookcase	3	1	3	3
0	Equipment Closet	3	4	12	0
TOTAL NET FLOOR AREA					127
	Plus Occupant Load:				
1	Occupants	60			60
2	Occupants	15			30
	GROSS FLOOR AREA				217
	(SF Minimum)				

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

4. Dispatch/Emergency Management

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Console area	8	8	64	64
1	Counter	5	2.5	12.5	13
3	Chairs	2	2	4	12
1	Refrigerator	3	3	9	9
1	Marker Board	4	3	12	12
1	TV	4	3	12	12
2	File Cabinet	1.5	2	3	6
1	Bookcase	3	1	3	3
1	Portable Radio Closet	3	4	12	12
	TOTAL NET FLOOR AREA				143
	Plus Occupant Load:				
1	Occupants		60		60
2	Occupants		15		30
	GROSS FLOOR AREA				233
	(SF Minimum)				

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

5. Kitchen (Commercial)

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Dishwasher	3	3	9	9
1	Stove/Oven w/Grittle	6	4	24	24
2	Counter	12	3	36	72
1	Island	10	4	40	40
1	Sink	6	3	18	18
1	Hand Sink	2	2	4	4
1	Prep Sink	2	2	4	4
2	Cabinets	4	2	8	16
1	Refrigerator	6	4	24	24
1	Freezer	4	4	16	16
1	Table for 8	3	8	24	24
10	Chairs	3	2	6	60
TOTAL NET FLOOR AREA					227
Plus Occupant Load:					
3	Occupants	60			180
7	Occupants	15			105
GROSS FLOOR AREA					512
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

6. Ready Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
2	Couch	6	3	18	36
4	Recliners	3	3	9	36
4	End Table	2	2	4	16
1	TV	5	2	10	10
1	Desk w/Return	5	5	25	25
5	Chair	2	2	4	20
4	4-Person Table	4	4	16	64
TOTAL NET FLOOR AREA					207
Plus Occupant Load:					
2	Occupants	60			120
6	Occupants	15			90
GROSS FLOOR AREA					417
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

7. Fitness

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
2	Trad Mill	6	3	18	36
2	Bike	3	3	9	18
1	Squat RackRack	4	4	16	16
1	Free Weights	8	8	64	64
1	Bowflex	4	6	24	24
1	Arobics	10	10	100	100
	TOTAL NET FLOOR AREA				258
	Plus Occupant Load:				
1	Occupants	60			60
1	Occupants	15			15
	GROSS FLOOR AREA				333
	(SF Minimum)				

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

8. Chief's Office

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Desk	3	5	15	15
2	Computer Desk	2	5	10	20
2	File Cabinet	1.5	2	3	6
1	Chair	3	3	9	9
4	Chair	2	2	4	16
1	Table	5	5	25	25
1	Bookcase	1	3	3	3
	TOTAL NET FLOOR AREA				94
	Plus Occupant Load:				
1	Occupants	60			60
4	Occupants	15			60
	GROSS FLOOR AREA				214
	(SF Minimum)				

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

9. Deputy Chief's Office

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Desk	3	5	15	15
2	Computer Desk	2	5	10	20
2	File Cabinet	1.5	2	3	6
1	Chair	3	3	9	9
2	Chair	2	2	4	8
1	Bookcase	1	3	3	3
TOTAL NET FLOOR AREA					61
Plus Occupant Load:					
1	Occupants	60			60
2	Occupants	15			30
GROSS FLOOR AREA					151
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

10. OEM Office

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Desk	3	5	15	15
0	Computer Desk	2	5	10	0
2	File Cabinet	1.5	2	3	6
3	Chair	2	2	4	12
1	Bookcase	1	3	3	3
TOTAL NET FLOOR AREA					36
Plus Occupant Load:					
1	Occupants	60			60
2	Occupants	15			30
GROSS FLOOR AREA					126
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

11. Shift Supervisor's Office

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Desk	3	5	15	15
1	Computer Desk	2	5	10	10
2	File Cabinet	1.5	2	3	6
3	Chair	2	2	4	12
1	Bookcase	1	3	3	3
TOTAL NET FLOOR AREA					46
Plus Occupant Load:					
1	Occupants	60			60
2	Occupants	15			30
GROSS FLOOR AREA					136
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

12. Bunk Rooms X4

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
2	Beds	4	7	28	56
1	Closet	2	1	2	2
				0	0
	TOTAL NET FLOOR AREA				58
	Plus Occupant Load:				
1	Occupants	60			60
1	Occupants	15			15
	GROSS FLOOR AREA				133
	(SF Minimum)	X4			532

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

13. Volunteer Office

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Desk	3	5	15	15
0	Computer Desk	2	5	10	0
2	File Cabinet	1.5	2	3	6
3	Chair	2	2	4	12
1	Bookcase	1	3	3	3
TOTAL NET FLOOR AREA					36
Plus Occupant Load:					
1	Occupants	60			60
2	Occupants	15			30
GROSS FLOOR AREA					126
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

14. Future Office

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Desk	3	5	15	15
0	Computer Desk	2	5	10	0
2	File Cabinet	1.5	2	3	6
3	Chair	2	2	4	12
1	Bookcase	1	3	3	3
TOTAL NET FLOOR AREA					36
Plus Occupant Load:					
1	Occupants	60			60
2	Occupants	15			30
GROSS FLOOR AREA					126
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

15. Female Lockers / Showers / Toilets

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
2	Water Closet	5	5	25	50
2	Lavatory	3	5	15	30
2	Showers	4	4	16	32
6	Lockers	2	2	4	24
5	Lockers	1	2	2	10
3	Benches	1	3	3	9
	TOTAL NET FLOOR AREA				155
	Plus Occupant Load:				
1	Occupants	60			60
1	Occupants	15			15
	GROSS FLOOR AREA (SF Minimum)				230

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

16. Male Lockers / Showers / Toilets

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
2	Water Closet	5	5	25	50
2	Lavatory	3	5	15	30
2	Showers	4	4	16	32
2	Lockers	2	2	4	8
5	Lockers	1	2	2	10
3	Benches	1	3	3	9
1	Urinals	3	5	15	15
TOTAL NET FLOOR AREA					154
Plus Occupant Load:					
1	Occupants	60			60
1	Occupants	15			15
GROSS FLOOR AREA (SF Minimum)					229

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

17. Laundry / Janitor's Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Washer	3	3	9	9
1	Dryer	3	3	9	9
1	Utility Sink	3	6	18	18
1	Counter	4	2.5	10	10
1	Slop Sink	3	3	9	9
	TOTAL NET FLOOR AREA				55
	Plus Occupant Load:				
1	Occupants	60			60
1	Occupants	15			15
	GROSS FLOOR AREA (SF Minimum)				130

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

18. Miscellaneous

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Lobby	20	20	400	400
1	Vestibule	10	10	100	100
1	History Space	10	10	100	100
1	Mechanical Room	8	10	80	80
1	Electrical Room	8	10	80	80
1	IT Room	10	12	120	120
1	Sprinkler Room	4	6	24	24
	Elevator	8	10	80	0
	Elevator Machine Roo	8	10	80	0
1	Communications Room	5	8	40	40
1	File Storage	10	20	200	200
1	Storage	8	10	80	80
	TOTAL NET FLOOR AREA				1,224
	Plus Occupant Load:				
	Occupants	60			0
	Occupants	15			0
	GROSS FLOOR AREA				1,224
	(SF Minimum)				

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

19. Training Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
30	Chairs	2	2	4	120
15	Tables	1.5	4	6	90
1	Black Board	2	8	16	16
1	Podium	3	8	24	24
1	Table	4	8	32	32
1	Presentation Area	6	8	48	48
1	Table /Chair Storage	8	10	80	80
1	Training Storage	8	10	80	80
1	Lobby	10	10	100	100
1	Toilet Room	10	20	200	200
TOTAL NET FLOOR AREA					410
	Plus Occupant Load:				
2	Occupants	60			120
30	Occupants	15			450
GROSS FLOOR AREA					980
(SF Minimum)					

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

20. Conference Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Table for 12	10	4	40	40
12	Chairs	2	2	4	48
1	Closet VCR	3	3	9	9
2	Coffee Area	2	6	12	24
1	Marker Board	6	2	12	12
1	Presentation Area	3	6	18	18
	TOTAL NET FLOOR AREA				151
	Plus Occupant Load:				
1	Occupants		60		60
11	Occupants		15		165
	GROSS FLOOR AREA				376
	(SF Minimum)				

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

May-24

Furniture and Equipment List

21. Copier Equipment Room

EQUIPMENT LIST		SIZE		AREA	NET FLOOR
Quantities	Description	W	D	(SF)	AREA (SF)
1	Copier	8	4	32	32
1	Counter	8	2	16	16
0	Work Table	8	4	32	0
1	Mail Slots	6	1	6	6
1	Shreader	3	3	9	9
	TOTAL NET FLOOR AREA				63
	Plus Occupant Load:				
1	Occupants	60			60
1	Occupants	15			15
	GROSS FLOOR AREA				138
	(SF Minimum)				

**Upper Township
Division of EMS**

**PRELIMINARY
NEEDS ASSESSMENT**

May-24

SUMMARY

Program Project Cost Estimate

PHASE I:

1. Squad Room	4,667
2. Maintenance Room	190
3. Watch/ Control Room	217
4. Dispatch/Emergency Management	233
5. Kitchen (Commercial)	512
6. Ready Room	417
7. Fitness	333
8. Chief's Office	214
9. Deputy Chief's Office	151
10. OEM Office	126
11. Shift Supervisor's Office	136
12. Bunk Rooms X4	532
13. Volunteer Office	126
14. Future Office	126
15. Female Lockers / Showers / Toilets	230
16. Male Lockers / Showers / Toilets	229
17. Laundry / Janitor's Room	130
18. Miscellaneous	1,224
19. Training Room	980
20. Conference Room	376
21. Copier Equipment Room	138

SUB-TOTAL 11,287

Circulation 20% 2,257

TOTAL **13,544** SF

V. SOLUTIONS

Robbie Conley Architect has developed possible design solutions based on the information we have gathered from meetings with the representatives of the Upper Township Division of EMS. These solutions and diagrams were to be general possibilities to meet the needs of the Squad. The diagrammatical floor plans are for basic information and to develop a budgetary cost estimate based on current square foot construction costs for the region. All schemes developed in this study propose an addition and renovations to the existing building.

SCHEME 1:

In Scheme 1, an addition to the South end of the main building was developed. The addition contains primarily Operational functions with a Fitness area and large Training Room with a commercial Kitchen. The Training Room would have access directly to and from the exterior. The existing building is re-configured to accommodate the Administrative and House functions of the Division. The renovated space includes offices for O.E.M., Chief, Deputy Chief, Shift Supervisor and Volunteers and a Conference Room. As well, there are Bunk Rooms, Laundry and Locker/Shower/Toilet Rooms for both Male and Female members.

In this scheme, much of the existing infrastructure of the building is preserved with existing Offices on the Southeast corner being re-purposed, and the existing spaces on the East side of the building being maintained for use as Dispatch/Watch Room and Ready Room/Lounge. The existing Garage on the South end of the property would be used for vehicle maintenance and to house Utility vehicles.

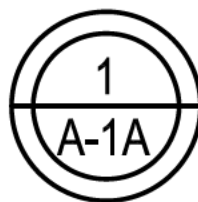
There are some advantages and disadvantages to this scheme.

The advantages include:

- Addition of Male and Female Locker Rooms and Bunk Rooms.
- Clear separations of Operational, Administrative and House functions.
- Several existing spaces are re-used.
- A secure Medical Storage room and Decon area are provided.

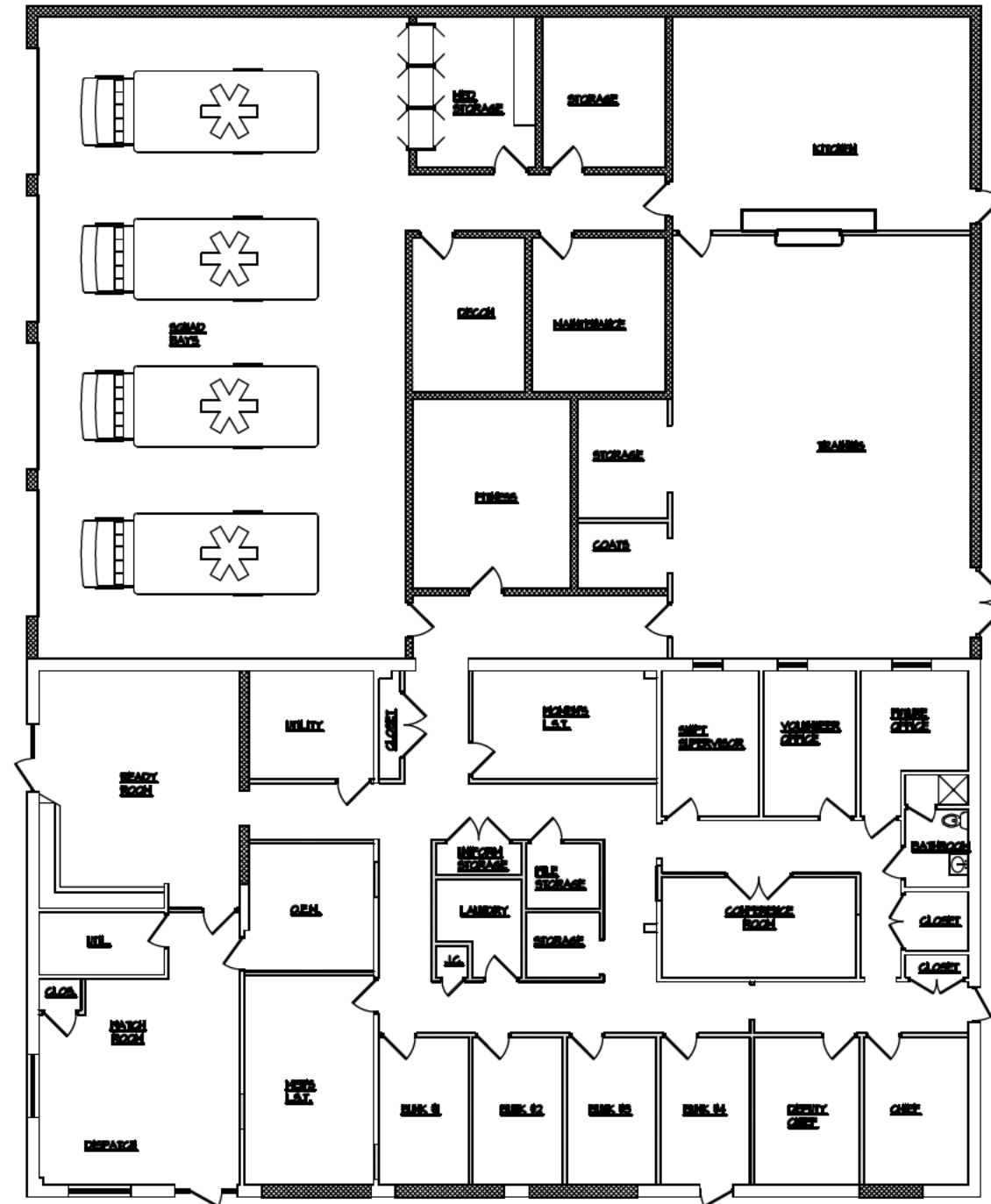
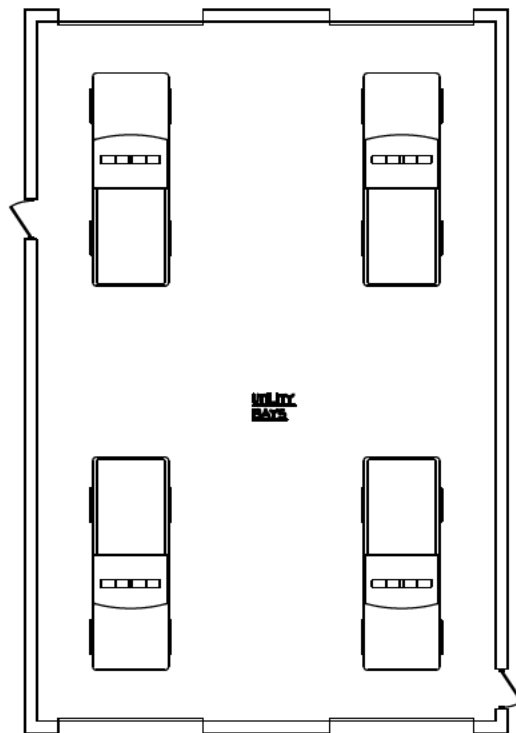
The disadvantages include:

- Not all vehicles are under one roof.
- Practicality of re-using the existing building.



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"



Robbie Conley Architect, LLC
596 Glassboro Road
Woodbury Heights, New Jersey, 08097
Phone: (856)-845-7500 Fax: (856)-853-0528
N.J. LIC. NO. 21AC00069700 NCARB CERT. NO. 52314 PA. LIC. NO. A30049051

SHEET TITLE CONCEPTUAL FLOOR PLAN	
PROJECT UPPER TOWNSHIP EMS BUILDING 2028 TUCKAHOE ROAD PETERSBURG, NJ 08270	OWNER TOWNSHIP OF UPPER 2100 TUCKAHOE ROAD PETERSBURG, NJ 08270
CONTRACTOR SHALL CHECK AND VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING PROCEEDING WITH WORK.	
REVISION DESCRIPTION	DATE
ISSUE DATE JULY 12, 2024	
DRAWN AND CHECKED	
DWG. NO. A-1 X OF X	
PROJECT NO. 24010	
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Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

Jul-24

Program Project Cost Estimate
Scheme A-1

1.	New Construction			
	5,621	SF	\$425	\$2,388,925
1.	Alterations			
	1,980	SF	\$375	\$742,500
1.	Renovations			
	5,091	SF	\$275	\$1,400,025
2.	Furniture & Equipment			
	12,692	SF	\$8.50	\$107,882
3.	Site Work			\$1,000,000
4	Demolition			\$48,000
5	Deisel Exhaust			\$60,000
6	Specialized Equipment			\$250,000
7	Emergency Generator			<u>\$115,000</u>
			Total Construction Cost	\$6,112,332
8	Professional Fees			\$573,986.56
9	Legal & Reproduction			\$9,758
10	20% Contingency			<u>\$1,222,466</u>
			Total Project Cost	\$7,918,543

SCHEME 2:

Comparable to Scheme 1, an addition is proposed to the East end of the building. In this case, the addition contains Operational areas as well as Administrative areas including offices for O.E.M., Chief, Deputy Chief, Shift Supervisor and Volunteers and Conference Room. The renovated existing building contains a Training Room with Commercial Kitchen, Bunk Rooms, Laundry and Locker/Shower/Toilet Rooms and Fitness area.

In this scheme, like Scheme 1, the spaces on the East side of the existing building are maintained for use as Dispatch/Watch Room and Ready Room/Lounge. Also, like Scheme 1, the existing Garage on the South end of the property would be used for vehicle maintenance and to house Utility vehicles.

There are some advantages and disadvantages to this scheme.

The advantages include:

- Addition of Male and Female Locker Rooms and Bunk Rooms.
- Operational, Administrative and House functions are efficiently grouped.
- A secure Medical Storage room and Decon area are provided.

The disadvantages include:

- Again, not all vehicles are under one roof.
- Practicality of re-using the existing building.



A circular logo consisting of two concentric circles. A horizontal line bisects the circles. The number '1' is positioned above the line, and the text 'A-1A' is positioned below the line.

FIRST FLOOR PLAN

SCALE: $1/6'' = 1'-0''$

Robbie Conley Architect, LLC
596 Glassboro Road
Woodbury Heights, New Jersey, 08097
Phone: (856)-845-7500
FAX: (856)-853-0528
NCAAB CERT. NO. 52314
P.A. LIC. NO. A20042651

SHOT TILE
CONCEPTUAL
FLOOR PLAN

UPPER TOWNSHIP EMS BUILDING
2028 TUCKAHOE ROAD
PETERSBURG, NJ 08270

CONTRACTOR SHALL CHECK AND
VERIFY ALL CONDITIONS AND
DIMENSIONS AT THE SITE BEFORE
PROCEEDING WITH WORK.

REVISIONS

ISSUE DATE:
JULY 12, 2024
DRAWN: AND CHECKED: RJC

DWG. NO.

A-2
 of

PROJECT NO.
24010

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401.926.5500

Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

Jul-24

Program Project Cost Estimate
Scheme A-2

1.	New Construction			
	5,177	SF	\$425	\$2,200,225
1.	Alterations			
	3,359	SF	\$375	\$1,259,625
1.	Renovations			
	3,606	SF	\$275	\$991,650
2.	Furniture & Equipment			
	12,142	SF	\$8.50	\$103,207
3.	Site Work			\$1,000,000
4	Demolition			\$48,000
5	Deisel Exhaust			\$60,000
6	Specialized Equipment			\$250,000
7	Emergency Generator			<u>\$115,000</u>
			Total Construction Cost	\$6,027,707
8	Professional Fees			\$567,216.56
9	Legal & Reproduction			\$9,643
10	20% Contingency			<u>\$1,205,541</u>
			Total Project Cost	\$7,810,108

area

SCHEME 3:

Like Scheme 2, an addition is proposed to the East end of the building containing Operational areas as well as an Administrative suite containing offices for O.E.M., Chief, Deputy Chief, Shift Supervisor and Volunteers and Conference Room. The renovated existing building contains a Training Room with Commercial Kitchen, Bunk Rooms, Laundry and Locker/Shower/Toilet Rooms and Fitness area.

In this scheme, like the previous schemes, the spaces on the East side of the existing building are maintained for use as Dispatch/Watch Room and Ready Room/Lounge. In Scheme 3, all vehicles would be housed under one roof, including two pull-through bays.

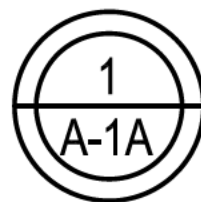
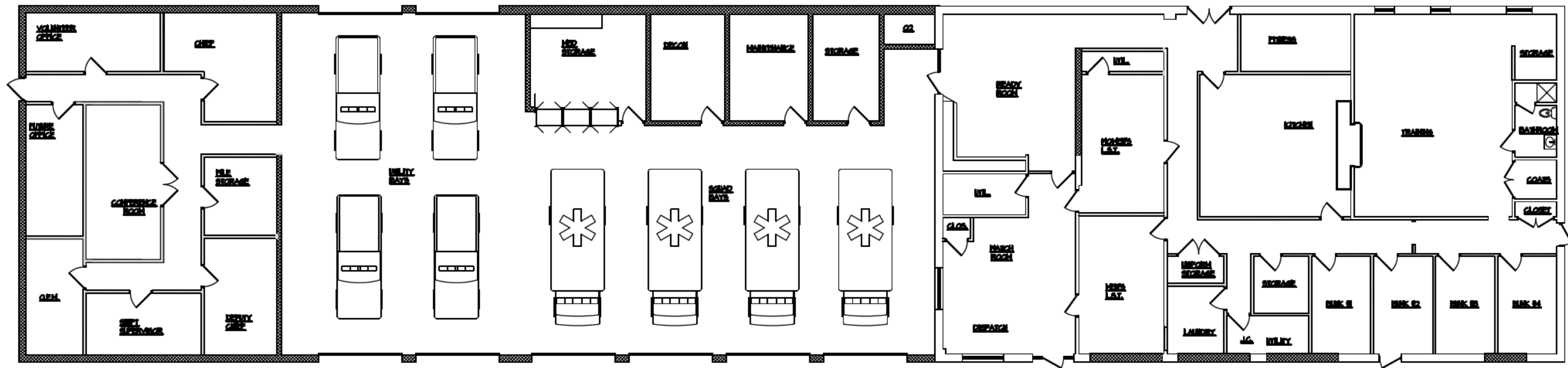
There are some advantages and disadvantages to this scheme.

The advantages include:

- Addition of Male and Female Locker Rooms and Bunk Rooms.
- Operational, Administrative and House functions are separated.
- A secure Medical Storage room and Decon area are provided.
- All vehicles under one roof
- Two pull-through bays are provided.

The disadvantages include:

- Practicality of re-using the existing building.



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

Robbie Conley Architect, LLC
596 Glassboro Road
Woodbury Heights, New Jersey, 08097
Phone: (856)-845-7500 Fax: (856)-853-0528
N.J. LIC. NO. 21AC00069700 NCARB CERT. NO. 52314 P.A. LIC. NO. A20049051

DATE: 7/12/24

SHEET TITLE
CONCEPTUAL
FLOOR PLAN

PROJECT
UPPER TOWNSHIP EMS BUILDING
2028 TUCKAHOE ROAD
PETERSBURG, NJ 08270
OWNER
TOWNSHIP OF UPPER
2100 TUCKAHOE ROAD
PETERSBURG, NJ 08270

CONTRACTOR SHALL CHECK AND
VERIFY ALL CONDITIONS AND
DIMENSIONS PRIOR TO BEGINNING
PROCEEDING WITH WORK.

REVISION
DATE

ISSUE DATE
JULY 12, 2024
DRAWN AND
CHECKED

DWG. NO.
A-3
X OF X

PROJECT NO.
24010

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Upper Township
Division of EMS

PRELIMINARY
NEEDS ASSESSMENT

Jul-24

Program Project Cost Estimate
Schme A-3

1.	New Construction			
	6,776	SF	\$425	\$2,879,800
1.	Alterations			
	3,615	SF	\$375	\$1,355,625
1.	Renovations			
	1,016	SF	\$275	\$279,400
2.	Furniture & Equipment			
	11,407	SF	\$8.50	\$96,960
3.	Site Work			\$1,000,000
4	Demolition			\$48,000
5	Deisel Exhaust			\$60,000
6	Specialized Equipment			\$250,000
7	Emergency Generator			<u>\$115,000</u>
Total Construction Cost				\$6,084,785
8	Professional Fees			\$571,782.76
9	Legal & Reproduction			\$9,720
10	20% Contingency			<u>\$1,216,957</u>
Total Project Cost				\$7,883,244

area

VI. CONCLUSION

The conceptual designs presented in this study maintained the existing building as a matter of economics. It would seem that renovating an existing building and re-purposing the spaces would be more financially practical than starting from scratch. While this is generally true, the existing building is a pre-engineered metal building. The structure is a complete and closed system which is virtually impossible to modify or add on to. Assumptions were made regarding the location of structural components, but there is no way to verify without the removal of some walls and/or ceilings.

The concepts presented in this document are exploratory in the sense that the objective was to generate possible solutions based on spatial and adjacency requirements as identified in the Needs Assessment. They are simply to be used as a preliminary study tool. An actual design solution will require a far more extensive exploration into every aspect that would provide the most functional and efficient outcome.

Having gone through this exercise, it is apparent that most of the needs can be met by re-configuring existing spaces and building of an addition. An addition, as noted above, would be cumbersome, and the question arises as to the practicality of spending large sums of money renovating a building that is seemingly at the end of its useful life. When one compares the costs of renovating an old building to bring it into conformance with today's standards to that of building a new building, it becomes apparent that it makes better sense to build new. The life expectancy of a new facility would likely be 40 to 50 years.

Additionally, the existing building is deficient in many ADA and Barrier-Free compliances. Many aspects of the building would need to be updated. Barrier-Free design is a requirement of the NJ Building Code, and ADA is a civil law. With poor accessibility throughout the building, the organization is leaving itself open to possible legal action.

**Upper Township
Division of EMS**

**PRELIMINARY
NEEDS ASSESSMENT**

May-24

**Program Project Cost Estimate
New Building**

1.	New Construction			
	13,544	SF	\$425	\$5,756,115
2.	Furniture & Equipment			
	13,544	SF	\$8.50	\$115,122
3.	Site Work			\$1,000,000
4	Demolition			\$68,000
5	Deisel Exhaust			\$60,000
6	Specialized Equipment			\$250,000
7	Emergency Generator			<u>\$115,000</u>
			Total Construction Cost	\$7,364,237
8	Professional Fees			\$674,138.98
9	Legal & Reproduction			\$11,460
10	10% Contingency			<u>\$736,424</u>
			Total Project Cost	<u>\$8,786,260</u>