

PUBLIC SAFETY SPACE NEEDS ASSESSMENT

BOXBOROUGH, MASSACHUSETTS

MAY 1, 2015

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

In October 2014, HKT Architects was selected by the Town of Boxborough to prepare a feasibility study and space needs assessment for the Boxborough police and fire departments. The mandate for the project was to work with the police and fire departments, review existing data and make recommendations regarding the following issues:

- What are the conditions of the existing police and fire stations and is there any potential for reusing these structures in whole or in part?
- What are the current and future space needs of the Boxborough police and fire departments?
- How might the departments' space needs be met (i.e. renovation and addition, new construction, separate or combined facilities)?
- Is the existing site adequate in size to meet projected space needs? If not, what is the ideal site size?
- What would be the cost for a new facility to meet the departments' needs?

It should be noted that the goal of this study was not to propose a final design for a public safety facility. Several conceptual schemes were developed and preferred schemes were selected so that estimated probable costs could be developed. These schemes are not meant to be final designs, but they do set the stage for the ensuing design work necessary for a new facility.

Once the study was underway, HKT Architects recommended to the Town that a committee be formed to advise the study process. The committee would be formed of members of various groups around Town who might influence the design and construction process as well as interested Boxborough residents. The Boxborough Public Safety Space Needs Advisory Group was formed as a result of this recommendation and has provided valuable guidance throughout the study process.

Methodology

HKT Architects met with Chief Warren Ryder and Chief Randolph White in November 2014 to define their needs in terms of a space program and to tour the existing police and fire station. During a follow-up meeting in December 2014, the draft program was reviewed and some adjustments made to develop the final ideal space program. That same day, the Space Needs Advisory Group met for the first time. As part of the first meeting, HKT facilitated an interactive visioning session with the group. During the visioning session, HKT asked members of the Space Needs Advisory Group a number of questions to encourage discussion and reflection on the public safety project. Participants were asked to write responses to the questions on post-it notes which were collected, sorted and responses were shared with the group.

Next, HKT developed conceptual “test fit” options on the site. The purpose of these options was to demonstrate how the ideal space program previously developed might be organized on the existing site. Various options demonstrated possibilities for renovation and additions to one or both of the existing buildings as well as new construction. The Space Needs Advisory Group reviewed the pros and cons of all options and selected for further study three options that represented a range of approaches.

In February 2015, HKT and Pare Corporation toured the existing police and fire stations again for the purpose of assessing the buildings’ existing conditions. Particular attention was paid to potential reuse suggested by the selected conceptual options.

Cost Analysis

Finally, HKT developed estimated probable costs for each of three schemes selected by the Space Needs Advisory Group. All project costs apparent at this time were included in this estimate including the cost of construction (hard costs) and various administrative costs (soft costs) such as architectural and engineering fees, project management fees and temporary relocation costs, among others. The intent of this estimate was to gain a better understanding of what a public safety facility sized based upon the ideal program might cost the Town of Boxborough. With this information in hand, the Town leadership could then decide what next steps should be taken in the project.

Conclusion

The Space Needs Advisory Group met again in March 2015 to review the study findings and deliberate next steps. The general consensus of the Group was that the projected total project costs for the three schemes, which met the police and fire departments’ needs, greatly exceeded what would likely be approved by the taxpayers at the annual Town Meeting. While the study provided valuable information on the space needs for the departments and existing facilities’ deficiencies, the Group recognized it would be necessary to revisit the departments’ needs to determine what compromises would be required to reduce the building size thereby reducing total project costs to be within a budget acceptable to the Town. The Space Needs Advisory Group recommended that funds to continue the study be requested at annual Town Meeting in May 2015. Should funding be approved, the Space Needs Advisory Group would determine an upper and lower end range for total project costs and HKT Architects would then work with the police and fire departments to develop a compromise space needs program that would be developed into designs within that budget range. The ultimate goal of the extended study would be to develop a design to the point it could be professionally cost estimated and funding for total project costs could be requested at a later Town meeting.

SPACE NEEDS ASSESSMENT

The following pages represent the initial space program for the Boxborough Public Safety Facility. The programming process began with a set of questionnaires that were completed by the police and fire departments and which outlined general information about the departments including current and anticipated future staffing levels and vehicle and equipment inventories. After responses were gathered, HKT Architects interviewed Police Chief Warren Ryder and Fire Chief Randolph White and toured the existing police and fire stations. Our goal of these meetings was to focus on how staff of the departments perform various functions rather than asking for a compilation of spaces that they thought they would need. Discussions focused on each department's current and future needs as well as the potential for shared use spaces and spaces that might be used by other groups in Town. Existing spaces were observed during site visits for adequacy of space available and how that space was configured to meet operational needs. Available drawings of the existing police and fire stations were also reviewed to document existing space use.

Following the initial programming meetings, HKT analyzed the data collected and compared projected space needs with those of similar towns and with industry best practices. The space needs were then illustrated graphically with room data sketches showing idealized layouts of each individual room or space and verbally with room data sheets which describe the quantitative and qualitative aspects of each room. Tabulations of required program spaces were developed by adding the net square footage (NSF), defined as the area required to do an activity, of each functional space and then applying grossing factors to determine the building program gross square footage (GSF) including areas for circulation and wall construction. Drafts of these documents were shared with the departments to obtain their feedback and various revisions were made.

The final space program demonstrates the need for a 34,967 gross square foot facility. A summary of the program is below:

Gross Square Footage	
Shared/Town Spaces	6,427 GSF
Police Department Spaces	10,179 GSF
Fire Department Spaces	18,362 GSF
Total*	34,967 GSF

**Numbers do not add up due to rounding of figures after applying grossing factors.*

It should be emphasized that the space needs program assumes a combined police and fire facility will be built. A shared facility benefits from the efficiencies of sharing building support spaces including a

lobby, mechanical, electrical, fire protection rooms and toilet facilities. In addition, this program includes a shared Training Room / Emergency Operations Center (EOC) and a Fitness Room. If separate police and fire stations were to be built, many of these spaces would need to be duplicated in each facility thus increasing the overall program square footage.

Parking needs were also analyzed as part of the space needs assessment. Parking counts took into account various factors including personal vehicles of staff, visitors and call firefighters as well as department owned vehicles. The resulting count factors in the anticipated vehicles on site during a shift change when personal vehicles from both the arriving and departing shift are on site along with departmental vehicles staff may drive while on shift. The count also factors in when call firefighters might be on site during a shift change. The following table summarizes the needs:

Parking Spaces	
Visitor/Town Employee Spaces	11
Police Department Spaces	27
Fire Department Spaces	21
Total	59

The program tabulation sheets on the following pages illustrate the departments' proposed ideal building program. Room data sheets and sketches with details of each room's space needs can be found in the Appendices.

	Space	Room Data #	Ref. Sketch #	Occupants	Visitors	Size proposed SF	Total SF	Notes
Shared Spaces								
PUBLIC AREAS								
	Entry Vestibule - Lobby	1	1S	0	0	412		
	Multi-Purpose / Safe Room	2	2S	0	4	144		
	Public Toilet 1 set of 2	3	3S	0	0	128		
	Training Room / EOC	4	4S	0	50	912		
	Training Storage	5	5S	0	0	80		
	SUBTOTAL						1676	
	Gross area adjustment 15%						251	
	Circulation adjustment at 25%						482	
	TOTAL						2409	
ADMINISTRATION								
	Conference Room	6	6S	0	8	192		
	SUBTOTAL						192	
	Gross area adjustment 15%						29	
	Circulation adjustment at 25%						55	
	TOTAL						276	
STAFF SUPPORT AREAS								
	Fitness Room	7	7S	0	6	750		
	SUBTOTAL						750	
	Gross area adjustment 15%						113	
	Circulation adjustment at 25%						216	
	TOTAL						1078	
SUPPORT								
	Janitor's Closet	8	8S	0	0	20		assumes 1 shared, 1 PD and 1FD
	Mechanical Room	9	9S	0	0	400		
	Main Electrical Room	10	10S	0	0	120		
	Plumbing / Fire Protection Room	11	11S	0	0	168		
	Emergency Electrical Room	12	12S	0	0	100		
	Stairs	13		0	0	800		
	Elevator and Machine Room	14		0	0	275		
	SUBTOTAL						1883	
	Gross area adjustment 15%						282	
	Circulation adjustment at 15%						325	
	TOTAL						2490	
	GRAND TOTAL SHARED SPACES						6254	
Town Spaces								
	Human Services Office	16	1T	1	2	120		
	SUBTOTAL						120	
	Gross area adjustment 15%						18	
	Circulation adjustment at 25%						35	
	TOTAL						173	
	GRAND TOTAL TOWN SPACES						173	

	Space	Room Data #	Ref. Sketch #	Occupants	Visitors	Size proposed SF	Total SF	Notes
	GRAND TOTAL POLICE DEPT						10179	
	GRAND TOTAL FIRE DEPT						18362	
	FACILITY GRAND TOTAL						34967	
	Parking							
	Town Employees					1		
	Visitors					10		
	Total Parking Police Dept					27		
	Total Parking Fire Dept					21		
	Grand Total Parking					59		

	Space	Room Data #	Ref. Sketch #	Occupants	Visitors	Size proposed SF	Total SF	Notes
	Police Department							
	PUBLIC AREAS							
	Dispatch	1	1P	2	0	396		
	Dispatch Supervisor	2	2P	1	1	100		
	SUBTOTAL						496	
	Gross area adjustment 15%						74	
	Circulation adjustment at 25%						143	
	TOTAL						713	
	ADMINISTRATION							
	Police Chief Office	3	3P	1	3	220		
	Administrative Assistant	4	4P	1	0	120		
	Lieutenant	5	5P	1	2	144		
	Detectives	6	6P	4	1	276		
	Detective Sergeant	7	7P	1	1	120		
	Interview Room	8	8P			120		
	AV Surveillance	9	9P			100		
	Archival Document Storage	10	10P			200		
	Office Supplies	11	11P			48		
	IT Support / Animal Control	12	12P	2	0	144		
	Server / E911 Room	13	13P			192		
	Staff Toilet 1 set of 2	14	14P			128		
	SUBTOTAL						1812	
	Gross area adjustment 15%						272	
	Circulation adjustment at 25%						521	
	TOTAL						2605	
	STAFF SUPPORT							
	Toilet / Shower / Locker Room Male	15	15P			1052		
	Toilet / Shower / Locker Room Female	16	16P			295		
	Janitor	17	17P			80		
	SUBTOTAL						1427	
	Gross area adjustment 15%						214	
	Circulation adjustment at 25%						410	
	TOTAL						2051	
	OPERATIONS							
	Sergeants	18	18P	6	0	260		
	Police Patrol Storage	19	19P			100		
	Roll Call / Lunch	20	20P	8	0	245		
	Report Writing	21	21P	3	0	355		
	Evidence	22	22P	1	0	324		
	Bulk Evidence	23	23P			160		
	Armory	24	24P			100		
	SUBTOTAL						1544	
	Gross area adjustment 15%						232	
	Circulation adjustment at 25%						444	
	TOTAL						2220	

Space	Room Data #	Ref. Sketch #	Occupants	Visitors	Size proposed SF	Total SF	Notes
DETENTION							
Sally Port / Impound Bay	25	25P			1080		
Tire and Parts Storage	26	26P			60		
Booking	27	27P			300		
Booking Holding	28	28P			72		
Detainee Shower / Decon	29	29P			50		
Detention Janitor	30	30P			30		
Detention Cell - Male	31	31P	1	0	140		(2) cells
Detention Cell - Female	32	32P	1	0	70		
SUBTOTAL						1802	
Gross area adjustment 15%						270	
Circulation adjustment at 25%						518	
TOTAL						2590	
GRAND TOTAL POLICE DEPT						10179	Assumes one combined Public Safety Facility with Police and Fire Departments - Stand-alone facility square footage will be greater to accommodate training, building services and other spaces.
Parking							
Current Staff (Officers + Civilian)					8		# of cars at shift change
Additional Future Staff					2		# of cars at shift change
Cruisers (Current and Future)					14		Includes unmarked, admin, command and motorcycle (2 future patrol, 1 future admin)
Trailers (Current and Future)					3		1 future
Total Parking Police Dept					27		

	Space	Room Data #	Ref. Sketch #	Occupants	Visitors	Size proposed SF	Total SF	Notes
Fire Department								
ADMINISTRATION								
	Fire Chief Office	1	1F	1	3	220		
	Administrative Assistant	2	2F	1	0	120		
	Deputy Fire Chief	3	3F	1	2	120		
	Captain	4	4F	1	2	120		
	Shared Office	5	5F	4	1	240		
	Plan Review / Office Equipment / Supplies	6	6F			144		
	Archival Document Storage	7	7F			120		
	Coat Closet	8	8F			13		
	Staff Toilet 1 set of 2	9	9F			128		
	SUBTOTAL						1225	
	Gross area adjustment 15%						184	
	Circulation adjustment at 25%						352	
	TOTAL						1761	
STAFF SUPPORT								
	Dorm Rooms	10	10F	1	0	420		(3) single occupancy, future double occupancy
	LT's Dorm Room	11	11F	1	0	140		
	Study Room	12	12F	1	0	100		
	Toilet / Shower / Locker Room Male	13	13F			725		
	Toilet / Shower / Locker Room Female	14	14F			239		
	Day Room	15	15F	8	0	396		
	Kitchen	16	16F			168		
	Janitor's Closet	17	17F			36		
	SUBTOTAL						2224	
	Gross area adjustment 15%						334	
	Circulation adjustment at 25%						639	
	TOTAL						3197	
OPERATIONS								
	Apparatus Bays	18-19	18F			10080		Size TBD with equipment sizes
	Hose Storage	20	19F			120		
	Gear Storage	21	20F			405		(30) Lockers
	Laundry	22	21F			156		
	Maintenance Workshop	23	22F			200		
	Medical Cleaning / Decontamination	24	23F			120		
	SCBA Fill Room	25	24F			108		
	Air Compressor	26	25F			40		
	Oxygen Storage	27	26F			32		
	Haz Mat Supply Storage	28	27F			140		
	Medical Supply Storage	29	28F			150		
	Bulk Storage	30	29F			216		
	Hose / Training Tower	31	30F			144		
	SUBTOTAL						11911	
	Gross area adjustment 15% (*)						1283	* 10% for Apparatus Bays
	Circulation adjustment at 10% (**)						211	** 0% for Apparatus Bays

	Space	Room Data #	Ref. Sketch #	Occupants	Visitors	Size proposed SF	Total SF	Notes
	TOTAL						13404	
	GRAND TOTAL FIRE DEPT						18362	Assumes one combined Public Safety Facility with Police and Fire Departments - Stand-alone facility square footage will be greater to accommodate training, building services and other spaces.
	Parking							
	Current Staff (Firefighters + Civilian)					7		# of cars at shift change
	Additional Future Staff (Firefigthers + Civilian)					1		# of cars at shift change
	Call Firefighters (Typical Call)					10		typical call - 30 maximum call
	Trailers (Light & Utility)					3		stored outside only if a ladder truck is acquired
	Total Parking Fire Dept					21		

CONCEPTUAL DESIGN – TEST FIT OPTIONS

Preliminary conceptual building and site diagrams were developed in response to the space needs identified during programming sessions with the police and fire departments. The purpose of these diagrams was to “test fit” the program on the site to determine if the existing site would be adequate in size for the proposed program. These diagrams were also useful in exploring options for renovating the existing police and/or fire stations versus demolishing the existing structures and building new.

In developing the diagrams, HKT grouped similar programmatic areas together into larger blocks of space which could be arranged on the site according to ideal adjacency relationships. Seven diagrams were then developed demonstrating the proposed ideal program on the site. The exercise demonstrated that while the existing site is tight, the proposed program could fit, with compromises. Most notably, all of the schemes encroached to some degree in the wetlands buffer zones. However, all schemes either reduced or maintained the existing quantity of impervious surfaces within the buffer zones. It is clear that should development on this site be pursued, early discussions with the Boxborough Conservation Commission will be required to agree upon an acceptable strategy for development.

Options A, B, C and D all renovate and add onto one or both of the existing buildings. On first glance the assumption is often made that renovating an existing structure will offer considerable savings to a project over new construction. However, it should be clear that any potential reuse option in this case would require major, gut renovations to the existing structures. Conditions of the existing buildings are outlined in detail in the Existing Conditions Assessment section of this report. In short, a major renovation of either structure would trigger compliance with the current building code requirements for lateral loads. For the police station, this might mean additional reinforcement will be added to masonry shear walls and plywood nailing added to wood framed walls. Structural upgrades to the fire station would be more extensive as the existing masonry walls are likely unreinforced. Extensive retrofitting would be required adding significant cost to the project. In addition, both buildings require upgrades to address universal accessibility and attention to various deferred maintenance issues. Even with renovations addressing all these issues, schemes involving reuse are still somewhat spatially constrained by the existing structure and may not ultimately provide the most flexible layout that meets the operational needs of the departments. For these reasons, renovation itself could be considered a disadvantage in the overall analysis of these options.

After reviewing the conceptual diagrams, the Space Needs Advisory Group agreed to explore the relative costs of three of the proposed options: C, F and G. Option C, a scheme which renovates and adds onto

the existing police station, was selected because it had the best flow of programmatic elements of all the renovation options. Options F and G are alike in that they both demolish the existing police and fire stations to build a new combined facility. Both also have an excellent flow of programmatic elements throughout the buildings. The primary difference between options F and G is the location of each of the departments on the site. Option F maintains the existing departmental relationships with the police department occupying the west side of the site and the fire department the east side. Option G flips this relationship with the fire department moving to the west side of the site and the police department on the east side. This flip opens the possibility for phasing construction in such a way to eliminate the need to find temporary facilities for fire department apparatus during construction. For this reason, the Space Needs Advisory Group chose to pursue both options.

The following pages summarize the seven test fit options developed during the study. A description of the goals, characteristics and advantages and disadvantages of each scheme is included.

OPTION A: STAND ALONE POLICE STATION AND FIRE STATION – MAJOR RENOVATIONS AND ADDITIONS

Design Goals

- Reuse the existing Police and Fire Stations.
- Both buildings to undergo major renovations and new additions.
- Maintain separation between the two buildings.

Police Station

The police station would be renovated completely with an addition to the building to the south and southwest. The public would enter the building at the upper level which would house dispatch, police administration and operations. The lower level of the existing building would be renovated to accommodate the detention area. The lower level of the new addition would house the sally port and the training room / EOC which would be shared by the departments and available to the community.

Fire Station

The fire station would be renovated completely with an addition to the north and west of the existing apparatus bays and a small addition to the north of the existing administration/living area. The public would enter the building through this new addition and into a renovated administration area. The fitness room would be on the second floor above the administrative area and would be shared by both departments. Living quarters would be housed in a portion of the renovated apparatus bays as well as the new addition and would be located behind the new apparatus bays. Existing apparatus bays would be renovated to act as support spaces as well as storage for smaller apparatus and equipment. Due to the existing grades at the street, the new apparatus bays would be split-level with three bays built at the existing finished floor elevation and three bays built with a floor elevation approximately six feet higher.

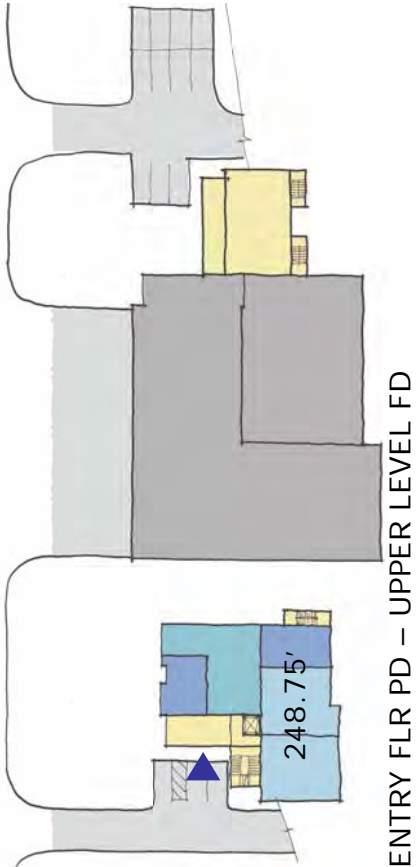
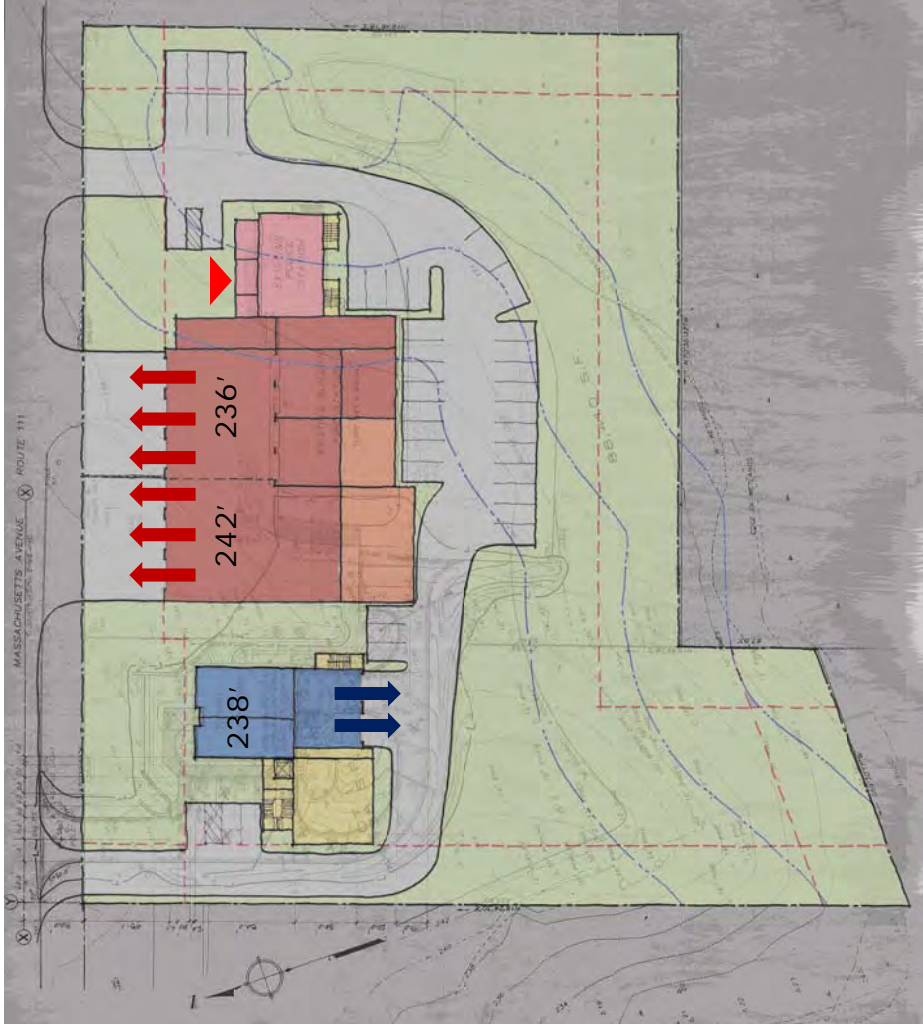
Advantages

- Reuse and renovation of both buildings may decrease overall construction cost.

Disadvantages

- Police detention and dispatch facilities are on different levels (which restricts the ability of dispatchers to conduct required cell checks on detainees and forces an officer to be brought in to monitor detainees while in custody).
- Apparatus bays split into two floor levels impacts operations and flexibility and increases cost.
- Parking count is less than ideal program figure.

A – STAND ALONE PD & FD – MAJOR RENOVATIONS & ADDITIONS



ENTRY FLR PD – UPPER LEVEL FD

- TRAINING/FITNESS/SUPPORT - SHARED
- DISPATCH/DETENTION/EVIDENCE - POLICE
- OPERATIONS - POLICE
- ADMINISTRATION - POLICE
- APPARATUS/SUPPORT - FIRE
- LIVING QUARTERS - FIRE
- ADMINISTRATION - FIRE

FIRST FLR FD – LOWER FLR PD / SITE PLAN

OPTION B: COMBINED FACILITY – REUSE POLICE STATION AND FIRE APPARATUS BAYS – MAJOR RENOVATIONS AND ADDITIONS

Design Goals

- Reuse the existing Police Station.
- Reuse the existing Fire Station's apparatus bays.
- Both buildings to undergo major renovations and new additions.
- Combine departments in a single facility.

Combined Facility

A combined facility would be created by renovating the existing police station and the existing apparatus bays with an addition connecting the existing structures. The public would enter the facility through a new lobby at the existing police station's first floor. An addition at this level would house the sally port and detention area which would be immediately adjacent to dispatch. Fire department living quarters are also on this level, separating the police department and the apparatus bays. An addition to the existing apparatus bays would increase their length, but would not widen the bays to meet current standards. Two new bays would meet programmatic requirements.

The lower level of the building would house police department operations, police and fire administration and shared spaces including the fitness room and building support.

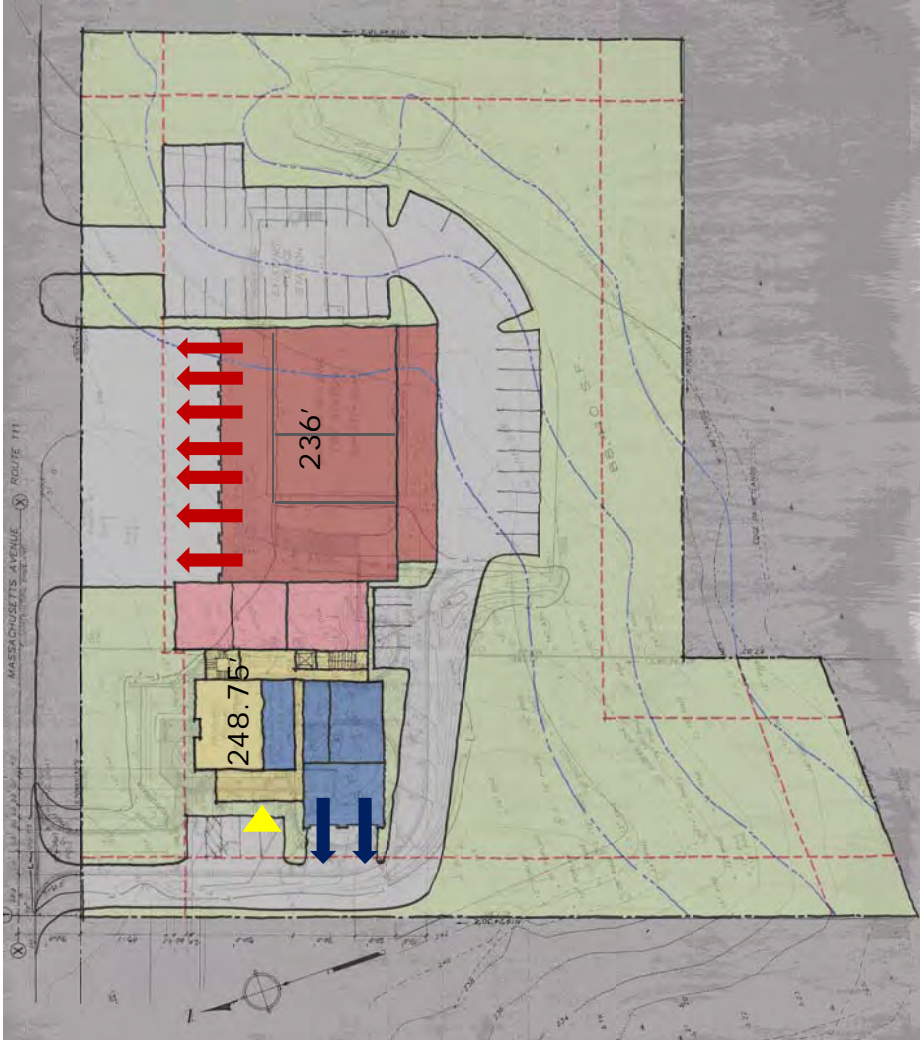
Advantages

- Reuse and renovation of the police station and a portion of the fire station may decrease overall construction cost.
- Police detention and dispatch facilities are on the same level allowing dispatchers to conduct required cell checks.
- The training room / EOC is located directly off the lobby making it easily accessible to the public.

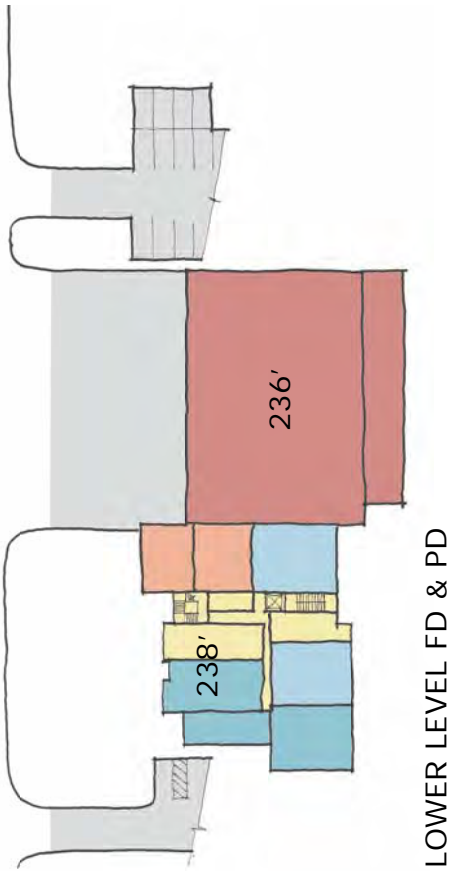
Disadvantages

- Only two apparatus bays would be wide enough and long enough to meet current best practices.
- Parking count is less than ideal program figure.

B – REUSE PD & FD APPARATUS – MAJOR RENOVATIONS & ADDITIONS



FIRST FLR FD – UPPER LEVEL PD WITH SHARED ENTRY / SITE PLAN



- TRAINING/FITNESS/SUPPORT - SHARED
- DISPATCH/DETENTION/EVIDENCE - POLICE
- OPERATIONS - POLICE
- ADMINISTRATION - POLICE
- APPARATUS/SUPPORT - FIRE
- LIVING QUARTERS - FIRE
- ADMINISTRATION - FIRE

OPTION C: COMBINED FACILITY – REUSE POLICE STATION – MAJOR RENOVATIONS AND ADDITIONS – PREFERRED OPTION

Design Goals

- Reuse the existing Police Station which would undergo major renovations.
- Demolish the existing Fire Station.
- Combine departments in a single facility.

Combined Facility

A combined facility would be created by renovating the existing police station with additions to the south, east and west creating a single public safety facility. The public would enter the building at the same location as the existing police station entry. This public lobby is directly accessible to dispatch and the training room / EOC. An addition to the south would house the new sally port and detention area at this level convenient to dispatch. Some police department operations and the fire department's day room would also be at this level. The apparatus bays and support spaces would be a half story down from the day room.

The existing lower level of the police station would be renovated to accommodate building support spaces and evidence storage. The shared fitness room and additional police department operations spaces would be at this level.

The second floor would be limited to police and fire department administrative offices providing some privacy and separation from the public. A half story down from this level and directly over the apparatus support space would be the fire department living quarters including dorm and locker rooms.

Advantages

- Reuse and renovation of the police station may decrease overall construction cost.
- Police detention and dispatch facilities are on the same level allowing dispatchers to conduct required cell checks.
- The training room / EOC is located directly off the lobby making it easily accessible to the public.
- Parking count is only two less than the ideal program figure.

Disadvantages

- Facility has five distinct floor levels.
- Fire department living quarters are not accessible by elevator.

20 January 2015



OPTION D: COMBINED FACILITY – REUSE POLICE STATION – MAJOR RENOVATIONS AND ADDITIONS

Design Goals

- Reuse the existing Police Station which would undergo major renovations.
- Demolish the existing Fire Station.
- Combine departments in a single facility.

Combined Facility

A combined facility would be created by renovating the existing police station with additions to the south, east and west creating a single public safety facility. In this scheme, the sally port entrance would be located at the rear of the police station on the lowest level. In order to keep detention and dispatch on the same level, dispatch would be located on the lowest level as would the public entrance. This forces the public entrance to the back of the site. While this entrance would be conveniently located to parking, it is remote from the street and creates difficulties for public wayfinding. In addition to dispatch and detention, police department operations would be located on the lower level.

The first floor would be dedicated to shared functions such as the training room / EOC and fitness room as well as police and fire department administration. The day room would be immediately adjacent to the apparatus bays, but located a half story up. The remaining fire department living quarters would be on the second floor.

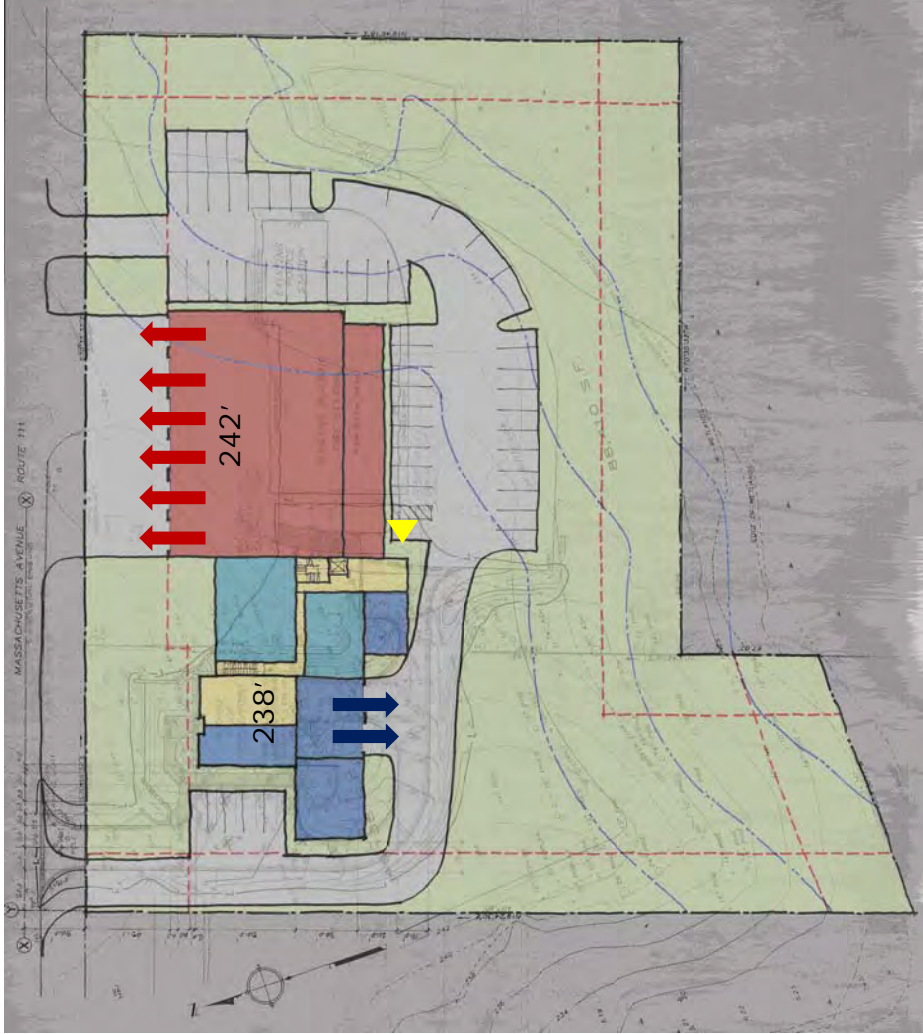
Advantages

- Reuse and renovation of the police station may decrease overall construction cost.
- Police detention and dispatch facilities are on the same level allowing dispatchers to conduct required cell checks.
- Parking count is only five less than the ideal program figure.

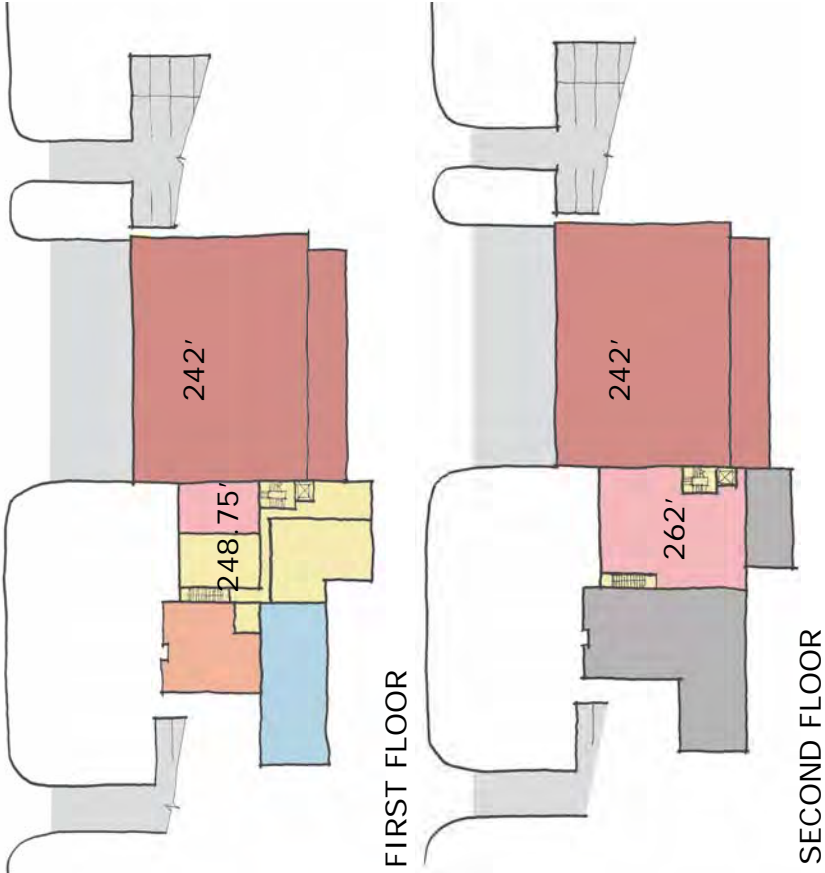
Disadvantages

- The public entrance is at the back of the site creating difficulties for public wayfinding.
- The training room / EOC is on a different level than the main public entrance.

D – REUSE PD ONLY – MAJOR RENOVATIONS & ADDITIONS



FIRST FLR FD & LOWER LEVEL PD WITH SHARED ENTRY / SITE PLAN



- TRAINING/FITNESS/SUPPORT - SHARED
- DISPATCH/DETENTION/EVIDENCE - POLICE
- OPERATIONS - POLICE
- ADMINISTRATION - POLICE
- APPARATUS/SUPPORT - FIRE
- LIVING QUARTERS - FIRE
- ADMINISTRATION - FIRE

OPTION E: COMBINED FACILITY – NEW CONSTRUCTION

Design Goals

- Demolish the existing Police and Fire Stations.
- Combine departments in a new single facility.

Combined Facility

A new combined facility would be built on the site after demolishing both existing stations. The public would enter the new facility close to the existing police station entrance. The lobby would be monitored by dispatch. A new sally port and detention area on the same level are easily monitored by dispatchers. Some police department operations spaces are also located on this level. The apparatus bays are a half story below the first floor.

The lower level would house all shared functions including the training room / EOC, fitness room and building support spaces. Police operations are also on this level.

The second floor spaces would include police and fire department administration and a shared conference room. Fire department living quarters are also on this level.

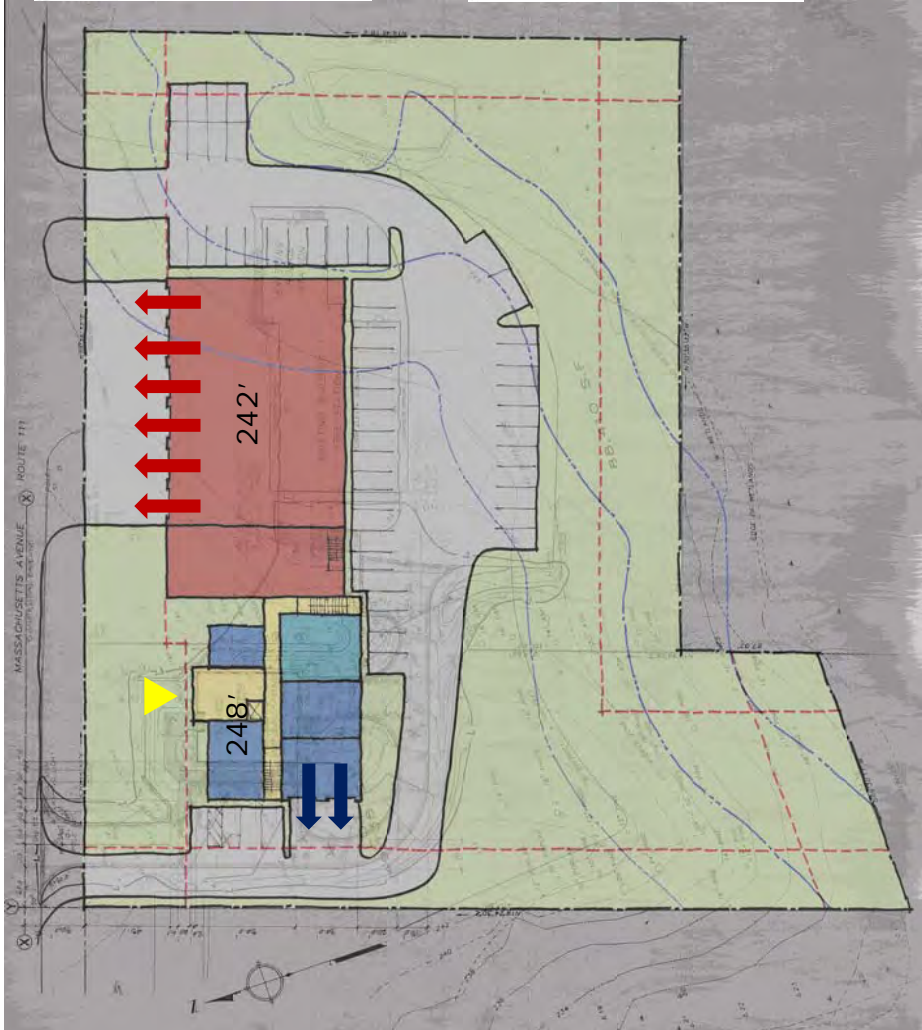
Advantages

- Police detention and dispatch facilities are on the same level allowing dispatchers to conduct required cell checks.
- Parking count is only four less than the ideal program figure.

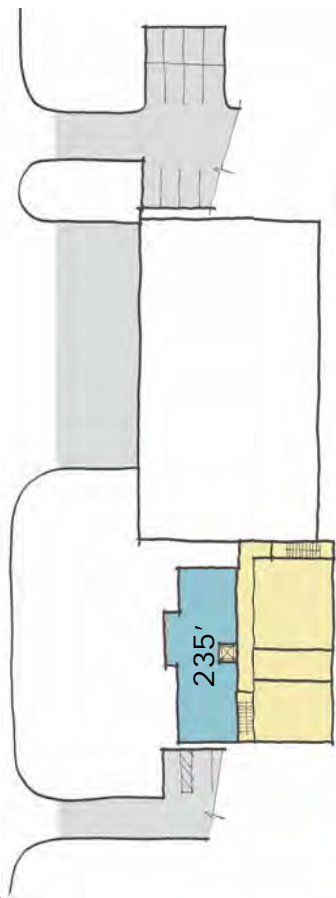
Disadvantages

- The training room / EOC is on a different level than the main public entrance.
- Fire department living quarters are approximately 19 feet higher than the apparatus bays. If the primary circulation for responding fire fighters is a fire pole, this is a long drop. If the primary circulation is stairs, this will increase response time for firefighters.

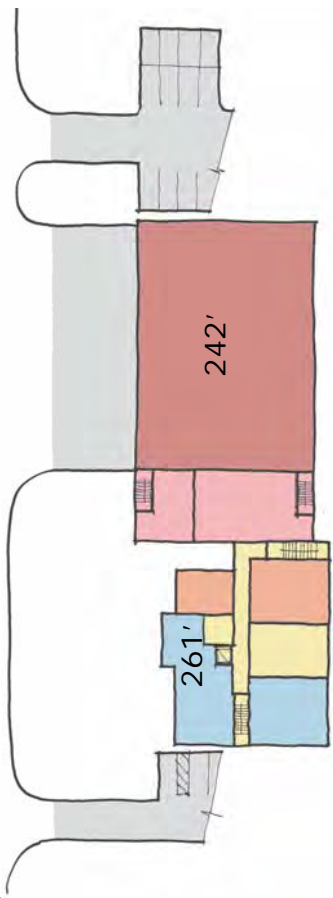
E – ALL NEW CONSTRUCTION ON THREE LEVELS



FIRST FLR FD & PD WITH SHARED ENTRY / SITE PLAN



LOWER LEVEL



SECOND FLOOR

- TRAINING/FITNESS/SUPPORT - SHARED
- DISPATCH/DETENTION/EVIDENCE - POLICE
- OPERATIONS - POLICE
- ADMINISTRATION - POLICE
- APPARATUS/SUPPORT - FIRE
- LIVING QUARTERS - FIRE
- ADMINISTRATION - FIRE

OPTION F: COMBINED FACILITY – NEW CONSTRUCTION – PREFERRED OPTION

Design Goals

- Demolish the existing Police and Fire Stations.
- Combine departments in a new single facility.

Combined Facility

A new combined facility would be built on the site after demolishing both existing stations. The public would enter the new facility on the first floor through a shared zone that separates functions of the two departments. The shared zone would house the lobby, training room / EOC and fitness room. To the west, police spaces would include dispatch, detention and a sally port. To the east, the fire department living quarters would be immediately adjacent to the new apparatus bays with only a two foot level change between the two. All remaining functions would be on the second floor of the building including police and fire administration, police operations, a shared conference room and some building support spaces.

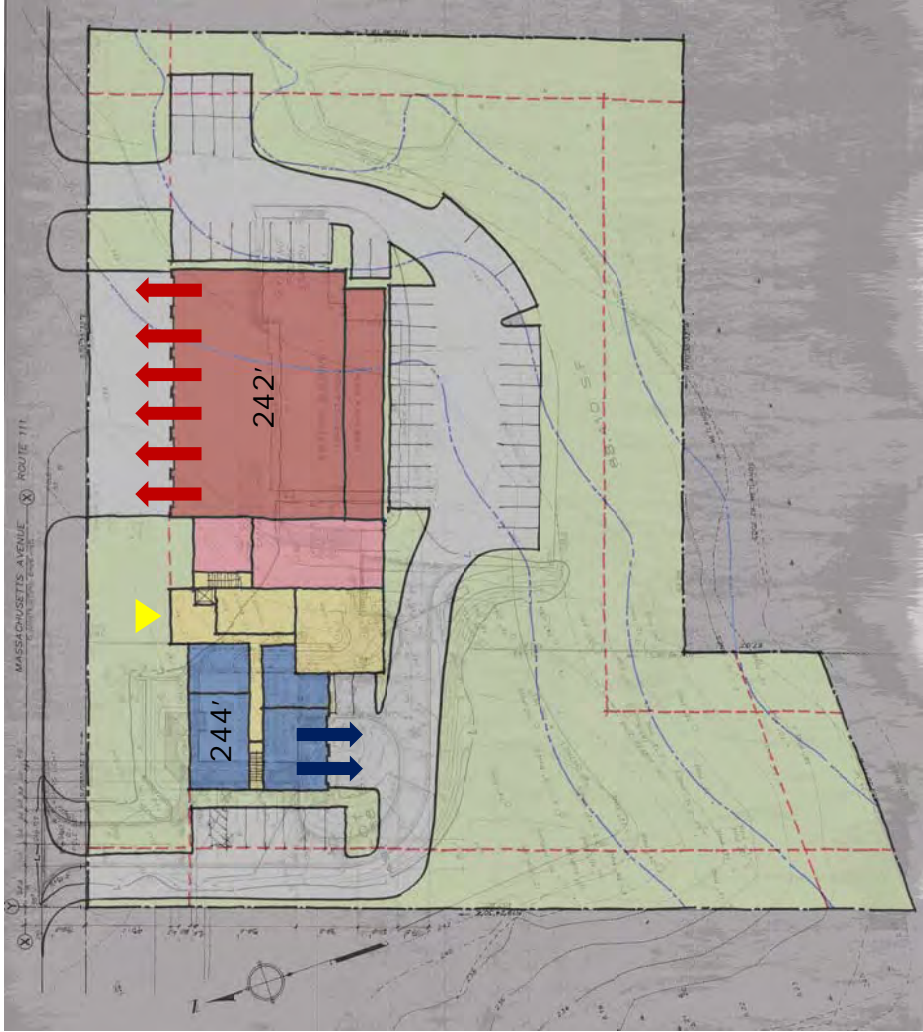
Advantages

- Police detention and dispatch facilities are on the same level allowing dispatchers to conduct required cell checks.
- The training room / EOC is on the same level as the main public entrance.
- There is a clear separation and flow between the two department's spaces.

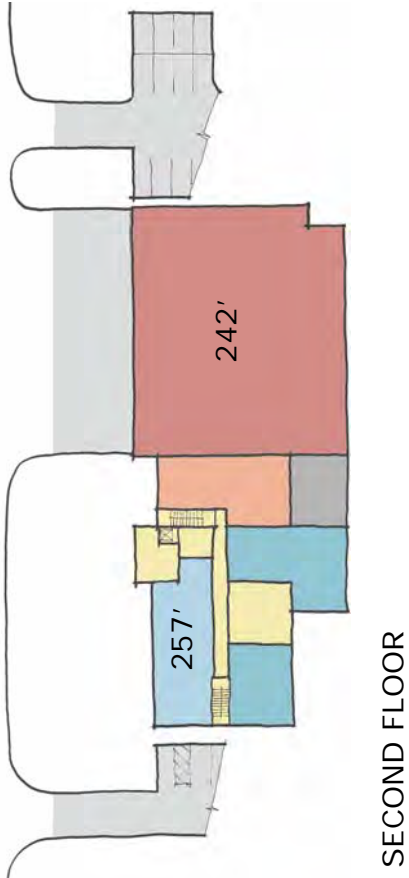
Disadvantages

- Parking count is less than the ideal program figure.

F – ALL NEW CONSTRUCTION ON TWO LEVELS



FIRST FLR FD & PD WITH SHARED ENTRY / SITE PLAN



- TRAINING/FITNESS/SUPPORT - SHARED
- DISPATCH/DETENTION/EVIDENCE - POLICE
- OPERATIONS - POLICE
- ADMINISTRATION - POLICE
- APPARATUS/SUPPORT - FIRE
- LIVING QUARTERS - FIRE
- ADMINISTRATION - FIRE

OPTION G: COMBINED FACILITY – NEW CONSTRUCTION – FLIPPED PLAN – PREFERRED OPTION

Design Goals

- Demolish the existing Police and Fire Stations.
- Combine departments in a new single facility.
- Move fire department functions to the east of the site and police department functions to the west of the site.

Combined Facility

A new combined facility would be built on the site after demolishing both existing stations. The public would enter the new facility on the first floor through a shared zone that separates functions of the two departments. The shared zone would house the lobby, training room / EOC and fitness room. To the east, police spaces would include dispatch, detention and a sally port as well as police operations.

On the second floor, police administration would be on the east side of the building. To the west, would be all fire department functions including administration, living quarters and the new apparatus bays. Only a two foot level changes separates fire department administration and living quarters from the apparatus bays.

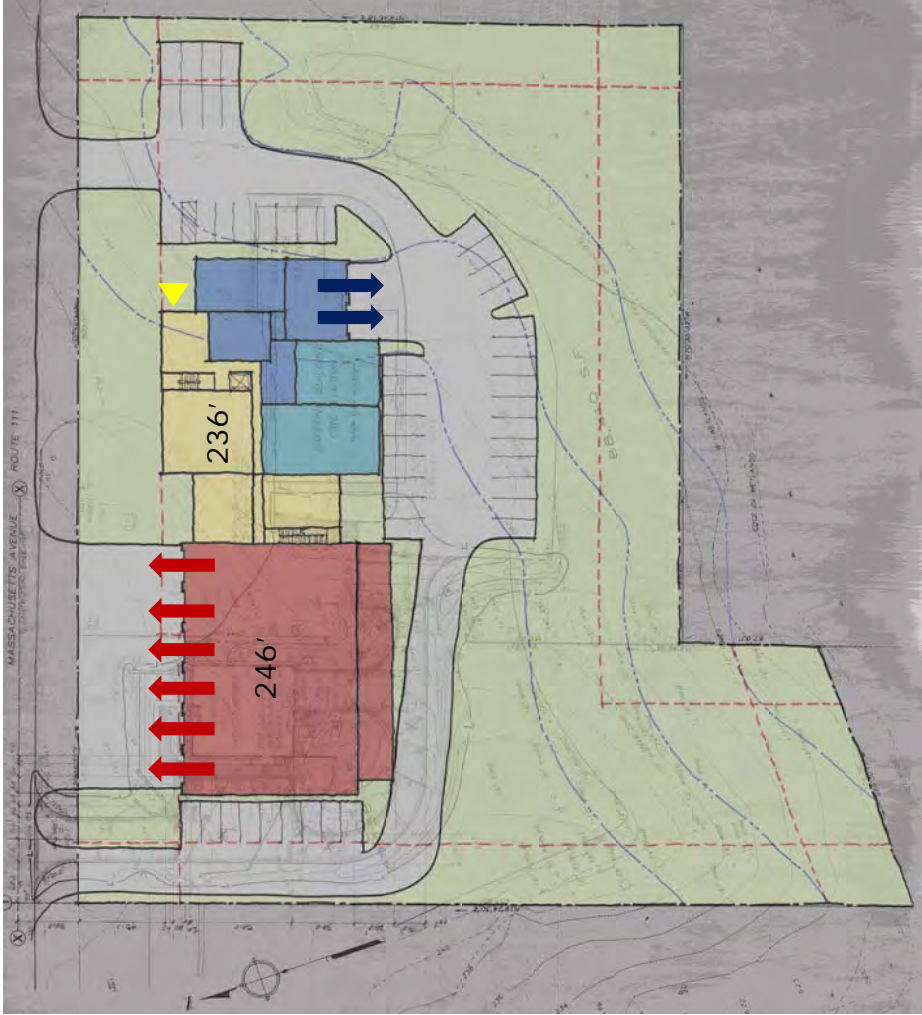
Advantages

- Police detention and dispatch facilities are on the same level allowing dispatchers to conduct required cell checks.
- The training room / EOC is on the same level as the main public entrance.
- There is a clear separation and flow between the two department's spaces.
- A major advantage of this scheme is in the ability to phase construction. The fire department could remain on site while the police station was demolished and new apparatus bays constructed. The fire department could then use the apparatus bays while the existing fire station was demolished and the remainder of the facility constructed. The police department would require temporary facilities during the entire construction phase.
- The apparatus apron is more ideally located in relation to school access drives located across Route 111.

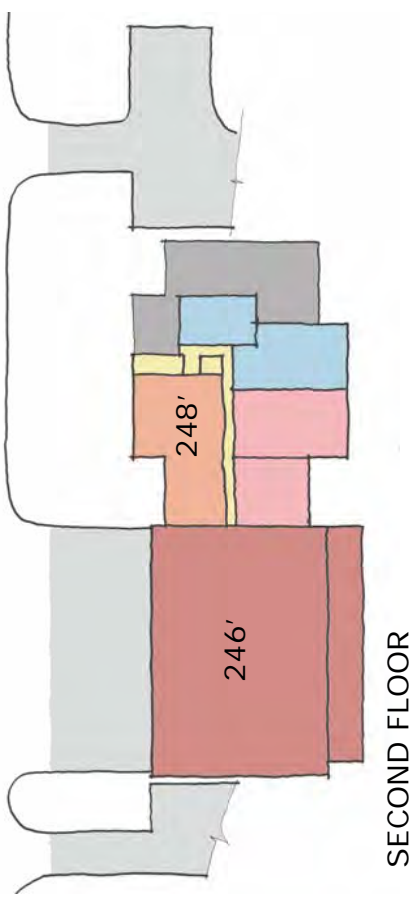
Disadvantages

- Parking count is less than the ideal program figure.

G – ALL NEW CONSTRUCTION ON TWO LEVELS – FLIPPED PLAN



FIRST FLR FD & PD WITH SHARED ENTRY / SITE PLAN



SECOND FLOOR

- TRAINING/FITNESS/SUPPORT - SHARED
- DISPATCH/DETENTION/EVIDENCE - POLICE
- OPERATIONS - POLICE
- ADMINISTRATION - POLICE
- APPARATUS/SUPPORT - FIRE
- LIVING QUARTERS - FIRE
- ADMINISTRATION - FIRE

EXISTING CONDITIONS ASSESSMENT

HKT Architects and Pare Corporation toured the existing police and fire stations in February 2015 in order to assess the buildings' existing conditions. Particular attention was paid to potential reuse suggested by the selected conceptual options as well as existing building and site issues that would need to be addressed by the Town if the buildings were to remain in service. Architectural, structural and civil reports detailing the design team's findings may be found in the following pages.

The original fire station was constructed in the late 1950s to early 1960s as a two-story, three bay structure. The original portion of the building has since been converted to accommodate the department's administrative and living spaces on the first floor and the training room on the second floor. Additions have been made to the existing building over the years including two separate additions first to replace and second to increase the number of apparatus bays.

When originally built, the fire station served a volunteer fire department. Full-time professional firefighters now staff the existing fire station with additional call firefighters responding during emergencies. Many municipalities are finding it increasingly difficult to staff their departments with call firefighters though as residents travel greater distances for work and are not available to respond to calls consistently in their home towns. The Boxborough fire department is no exception and it is anticipated the department will need to rely on more professional firefighters in the future in order to meet the public safety needs of the Town. The existing facility lacks the necessary office and living spaces to accommodate additional staff of an entirely full-time department.

Fire apparatus is also changing. Fire trucks are getting wider and longer to accommodate all the gear a modern fire department needs. Older stations often cannot accommodate newer equipment due to restrictions in the width of overhead doors and the width, length and height of bays. Departments are forced to either order custom equipment at a premium, modify existing buildings if possible or consider new facilities. Boxborough fire department anticipates being faced with this problem in the coming year with the purchase of a new pumper truck whose length will require modification to the existing bays.



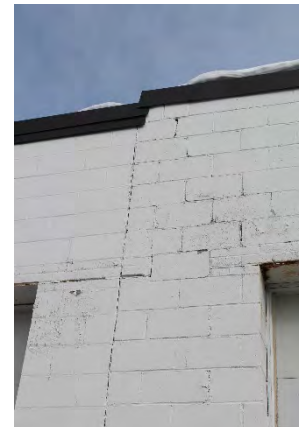
Existing apparatus bay width is also an issue. When on duty, firefighters typically place their turnout gear on the floor adjacent to their assigned apparatus. This practice greatly reduces response time in an emergency as firefighters can go directly to their apparatus, put on their turnout gear, get in the truck and leave the station.



Modern fire station design facilitates this practice with apparatus bays typically 18 to 20 feet in width providing adequate space between trucks for firefighters to gear up. The Boxborough fire station, like many of its era, has smaller bays of only 16 feet in width. This can pose a hazard to firefighters gearing up in an emergency as trucks in adjacent bays quickly leave the station. If a firefighter were to stumble while dressing they could easily be injured by an exiting truck.

In summary, due to staffing changes, changes in the types and sizes of fire apparatus and other factors, the existing fire station facility does not meet the Boxborough fire department's current and projected needs.

Physically, the design team found the existing fire station to generally be in fair condition. For the building to be renovated, extensive structural upgrades would be required to the existing concrete masonry unit walls to meet current lateral load code requirements. The wood roof structure over the training room would also require structural retrofits. Should the Town elect to continue to use the existing fire station without any renovations, the building will still require some work. Repair of existing concrete masonry units, roof replacement, boiler replacement, bituminous paving repairs and other repairs and upgrades would be recommended.



The police station was built in the late 1980s to early 1990s. Renovations have been made to the dispatch area since that time.



The police station lacks many features typical of a modern police facility. Evidence storage is limited and there is no dedicated area for evidence processing. When evidence is processed, it is done in the conference room. This conference space serves multiple functions for the department including lunch room, roll call room, office space, copy room, evidence drop-off and file storage. Evidence processed in such an environment can be subject to chain of custody issues.

Chemicals must also be used in processing evidence such as retrieving latent fingerprints. These chemicals are used on the same table used by staff for eating lunch.

Security of the evidence room itself is not ideal. Evidence rooms should be constructed with interior partitions that extend to the underside of the floor or roof above to prevent someone from climbing above a ceiling in one room, over the evidence room walls and into the evidence room. Interior partitions surrounding the Boxborough evidence room do not extend to the underside of the roof and both the evidence room and surrounding rooms have easily accessed acoustical tile ceilings. In addition, the evidence room is located on an outside building corner comprised of wood stud walls with wood clapboard siding. These walls could be easily compromised if desired.

Police officers today have a considerable amount of gear used in the field. Modern facilities have locker rooms outfit with lockers to accommodate this gear. The Boxborough police locker rooms are undersized. The male locker room serves as training room, break room and armory as well with gun lockers and ammunition stores. A proper armory should be properly ventilated to exhaust fumes from solvents used in cleaning weapons.



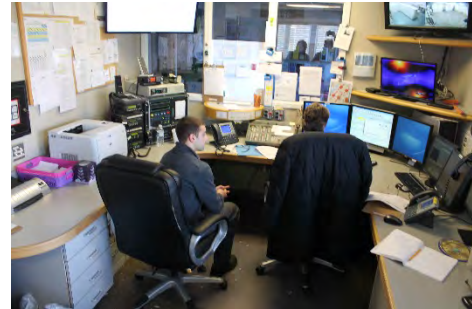
Massachusetts Department of Public Health regulations governing police detention facilities require that police officers physically check on the welfare of detainees at frequent intervals. As police dispatch is staffed around the clock, most police departments utilize dispatchers to perform this function. However, this requires that dispatch be located adjacent to the detention facility as dispatchers cannot be away from their post for long. In the Boxborough police station, this cannot be done as dispatch and detention are on different floors. Instead, when a detainee is in custody, staff are brought into the station to conduct the required cell checks and paid hourly for their time, adding to the department's annual personnel budget.



While flow of detainees from the sally port through booking and into cells is good, an undersized booking room compromises the safety of both officers and detainees. Booking rooms that are too small can become hazards if detainees begin acting out and officers need to bring them under control. Physical confrontations can force individuals into walls, counters and other surfaces causing bodily harm.

Acoustical privacy is lacking in the existing building. Sensitive conversations occurring in dispatch can be easily heard by individuals standing in the building lobby. Similar acoustic privacy is lacking between offices and the interview room. Acoustical issues for the interview room are particularly problematic if recorded statements become distorted or suspects outside the room can overhear what suspects inside are saying and alter their statements as a result.

Dispatch operations have changed since the station was built. The number and size of monitors dispatchers now watch has increased. Sensitive information is sometimes displayed on these monitors so it is important that they are placed in a way to prevent public standing at the dispatch window in the lobby from observing them. The one wall obscured from the public view in the existing police station is at capacity and monitors have been placed in other locations throughout the room. In addition, the space used as a server room was once a storage room and is now full of computer servers and racks.



Operationally, the police station does not serve the Boxborough Police Department's current and projected needs.

Physically, the design team found the existing police station to generally be in good condition. Should the building be renovated and added onto, it will need to be analyzed by a structural engineer for code required lateral loads to determine if upgrades are required. The building is not currently universally accessible. Renovations would require the addition of an elevator per current code regulations.

Building Name: Fire Station

Address: 502 Massachusetts Avenue, Boxborough, MA

Building Use: Fire Station

Type of Construction: Hybrid of masonry bearing walls, wood stud framing, concrete slab on grade, steel joists with metal decking or wood framing

Year of Construction: 1950's/1960's **Last Modification/Addition:** 1979

Report By: J Slemenda **GSF** 8,469 **Date:** 2/18/15

EXTERIOR CONDITIONS:

Wall Material(s): Brick with CMU back-up on north elevation (Photo No. 1), Painted 12" CMU on south, east and west elevations (Photo No. 2, 3, 4 + 5), Painted siding on east and south gable and dormer surfaces (Photo No. 2 + 3)

Wall Condition: Fair to poor. Brick appears in good condition but may need repointing. Single-wythe CMU shows signs of deteriorating with open joints, settlement and peeling paint (Photos 5 + 6). Shingle siding in fair condition. (Photo No. 2 + 3)

Wall Insulation: Vermiculite insulation in CMU cores; based on open joints and cracking value of insulation may be voided. Batt insulation visible in wall of upper level and along roof framing (Photo No. 7 + 8).

Window Types: Aluminum replacement windows or windows relocated during additions (Photo No. 9, 10 + 11). Double hung and fixed over hopper.

Window Conditions: Fair to Poor at original steel windows.

Exterior Door Types(s): Overhead doors (insulated 12' x 12' with vision panel) in apparatus bays (Photo No. 12), man-doors are insulated hollow metal doors in metal frames or residential paneled (Photo No. 13 and 16).

Exterior Door Conditions: The overhead doors are in generally good shape although some gaskets may need to be replaced. The egress doors work properly though they will need to be maintained.

Roof Type(s): Asphalt shingles on gable portion with aluminum gutters and leaders (Photo No. 17). There is batt insulation visible at roof framing at sloping roof (Photo No. 8). Roof over apparatus includes insulation on metal decking on steel joists with horizontal bridging supported on CMU. Roof or parapets are at various heights (Photo No. 18). Roof replacement in 2009 included replacement of sections of metal decking. Drawings indicate interior drains.

Roof Conditions: The asphalt roof was replaced around 2002. There are ice dams on the north side (Photo No. 17); no insulation was visible from the inside and the wood decking appeared dry (where visible) and in good shape. The flat roof was replaced in 2009 and is in good condition; roof drains run PVC leaders and drop at rear wall.

Other Ext. Issues: There has been water infiltration in the CMU walls visible throughout the apparatus bays (Photo No. 19). General painting and repair of all shingle trim and door surfaces will prolong life of items.

INTERIOR CONDITIONS:

Floor(s): First level is concrete slab on grade. Second level includes wood joists and underlayment. Carpet tiles in office and training areas, rubber flooring in kitchen, corridor outside of kitchen, and entry, and ceramic tile in toilet/shower room (Photo No. 20, 21 + 22). Fitness room is original slab on grade with no finish. Vinyl tile in second floor kitchen. Apparatus bays are 4" concrete with floor drains which have a gas/oil separator (Photo No. 23). Vinyl base.

Floor Conditions: Floors are in fair condition in living spaces. Some staining and wear patterns observed. The concrete slabs on grade show some signs of pitting and cracking.

Wall Types(s): Painted GWB and CMU (Photo No. 24, 25 +26).

Wall Conditions: Good in occupied spaces. Single-wythe CMU wall show obvious signs of finish deterioration.

Ceiling Types(s): Plaster skim coat, acoustic tile, GWB and unpainted decking (Photo No. 25, 27, 28, 29, 30 + 34).

Ceiling Conditions: Good in office. The ceilings in the bays are fair or are unfinished.

Interior Door Types(s): Doors are painted flush wood and hollow metal doors both in pressed metal and wood frames (Photo No. 14 + 15)

Interior Door Conditions: The doors are in fair shape. Doors located at offices are in better shape than those off of apparatus or support spaces. Some of the doors are ADA non-compliant as they do not have lever handle passage sets and in some cases there is not enough room on the latch side of the door.

EGRESS/LIFE SAFETY/CODE COMPLIANCE:

HCP Access: There is no vertical accessible access. The public access to the station is directly from grade.

Accessible Toilets: None (Photo No. 32).

Vertical Access: One interior stair, one open second means of egress on exterior to grade. (Photo No. 2 + 31)

Vertical Egress: See above.

Horizontal Egress: The horizontal egress appears to be code compliant.

RECOMMENDED ACTIONS:

This building has served the Townspeople well throughout its over 50 years of existence. It has been reconfigured and expanded as necessary to accommodate equipment and the personnel who work out of this facility.

Should the Town decide that a new facility is not possible at this time, funds will still have to be allocated to maintain and improve deteriorating conditions including exterior walls, doors, interior finishes and mechanical and electrical systems. An addition to accommodate modern equipment is anticipated. The building also does not meet modern code standards, including AAB and ADA, although if no significant upgrades are planned no updates would be required.

Though renovation with an addition is impossible, the work required to update the remaining building, and the compromises that would be made, are not recommended. In order to accommodate modern equipment and provide appropriate support spaces for firefighters a significant investment must be made.

GENERAL COMMENTS:

The following are important programmatic spaces that are essential for a functional and well equipped fire station and are deficient in this facility:

- Administrative office and support space including areas sized for training / meeting and plan review (Photo No. 44, 45 + 48).
- Day room and dorm rooms for staff (Photo No. 44, 46 + 47).
- Areas for the storage of documents and equipment (Photo No. 20).
- Vehicle bays appropriately sized in width, length and height.
- Turnout gear housed separately from the vehicles therefore not being subjected to fumes and light (Photo No. 39).
- Area for gear laundry and general laundry (Photos 41 + 42)
- Decontamination room for storage of equipment or showers for emergency decontamination.
- Separate climate controlled area for medical storage (Photo No. 35).
- Area for SCBA fill equipment and oxygen storage (Photo No. 36).
- Area for general storage and bulk items (Photo No. 37, 38, 40 + 43).
- Appropriately sized and separated MEPFP areas with modern equipment (Photos 33, 49 + 50).



Photo No. 1

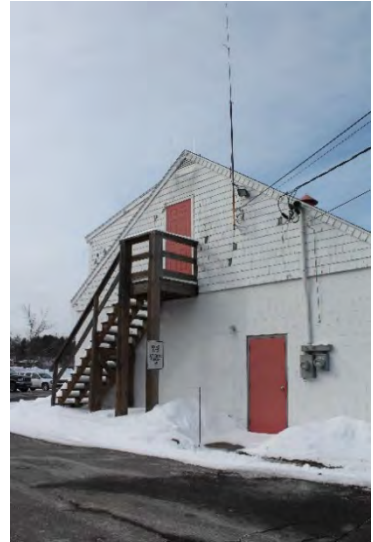


Photo No. 2



Photo. No. 3



Photo No. 4



Photo No. 5



Photo No. 6



Photo No. 7



Photo No. 8



Photo No. 9



Photo No. 10

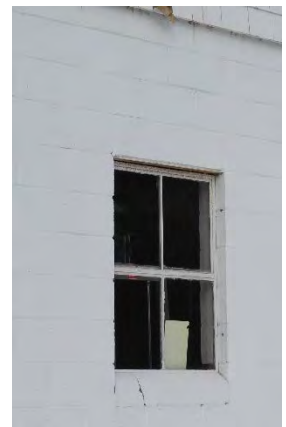


Photo No. 11



Photo No. 12



Photo No. 13



Photo No. 14



Photo No. 15



Photo No. 16



Photo No. 17



Photo No. 18



Photo No. 19



Photo No. 20



Photo No. 21



Photo No. 22



Photo No. 23



Photo No. 24

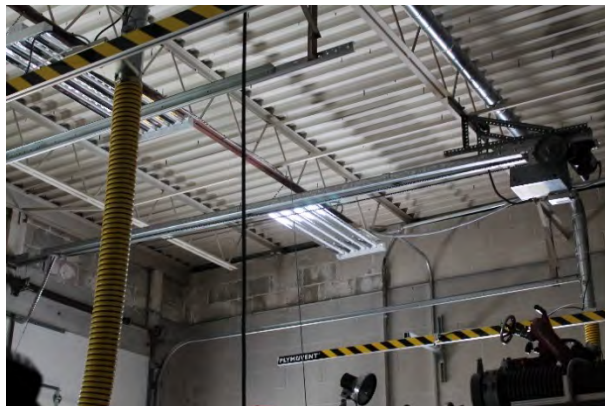


Photo No. 25



Photo No. 26

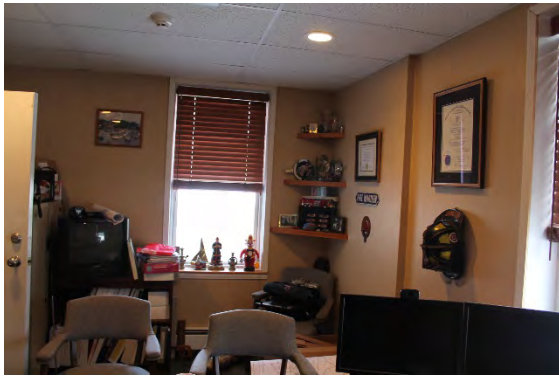


Photo 27



Photo 28



Photo 29



Photo 30

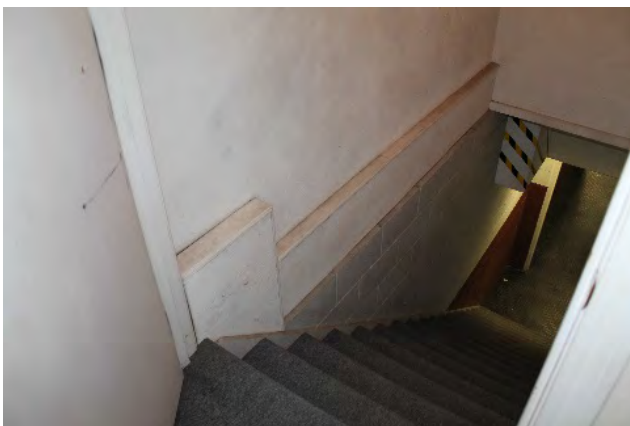


Photo 31



Photo 32



Photo 33



Photo 34



Photo 35



Photo 36



Photo 37



Photo 38



Photo 39



Photo 40



Photo 41



Photo 42



Photo 43



Photo 44



Photo 45



Photo 46



Photo 47



Photo 48



Photo 49



Photo 50

Building Name: Police Station

Address: 520 Massachusetts Avenue, Boxborough, MA 01719

Building Use: Police Station

Type of Construction: Wood stud framing on upper level, CMU at lower level, concrete plank, wood roof trusses

Year of Construction: 1989 **Last Modification/Addition:** None

Report By: J Slemenda **GSF** 4,613 **Date:** 2/11/15

EXTERIOR CONDITIONS:

Wall Material(s): Painted Wood Clapboard (Photos No. 1 + 2). Air infiltration barrier on sheathing, 2" x 6" wood stud.

Wall Condition: Good condition.

Wall Insulation: Batt insulation.

Window Types: Casements (Photo No. 3).

Window Conditions: Good

Exterior Door Insulated overhead doors in sallyport (Photo No. 3 + 4), insulated Types(s): hollow metal doors in metal frames (Photo No. 5).

Exterior Door Conditions: The doors are generally in good shape but with heavy use these doors show signs of wear and tear. Maintenance of these for air infiltration and for security issues is important on a routine basis.

Roof Type(s): Asphalt shingles, building paper, plywood sheathing on wood truss, gutters and aluminum downspouts (Photo No. 6).

Roof Conditions: The asphalt roof is original to the building.

Other Ext. Issues: The building exterior is in good shape. Routine maintenance is required to uphold this quality. Overhead doors should be maintained for weather tightness. Entry for building systems is at side wall into mechanical space adjacent to sallyport and detention block (Photo No. 7). Main entry and side egress are accessed from public parking area on slope (Photo No. 8)

INTERIOR CONDITIONS:

Floor(s): Carpet in office space, ceramic tile in toilets, concrete in sallyport and resinous flooring in detention (Photo No. 9, 10 + 11).

Floor Conditions: Flooring is generally in decent shape. Wear patterns do exist and carpet will need replacement.

Wall Types(s): Painted CMU on the lower level or painted gypsum drywall on wood studs in the upper portion of the police station (Photo No. 12, 13 + 14).

Wall Conditions: Good in occupied spaces. General wear and tear.

Ceiling Types(s): Acoustic Tile on administration level and lower level office support spaces, painted concrete plank in detention sallyport (Photo No. 15, 16 + 17).

Ceiling Conditions: Good.

Interior Doors: Flush or glazed wood doors with hollow metal frames (Photo No. 11, 12, 13 + 14).

Interior Doors Good condition.
Conditions:

EGRESS/LIFE SAFETY/CODE COMPLIANCE:

HCP Access: There is no vertical accessible access. The public access to the police station is accessible directly from grade (Photo No. 8)

Accessible Toilets: There are accessible toilets on the upper level of the police station.

Vertical Access: One stair at the police station. (Photo No. 19)

Vertical Egress: Since the structure is built into a hill, both floors egress directly on grade.

Horizontal Egress: The horizontal egress appears to be code compliant.

RECOMMENDED ACTIONS:

This building has served the community well as a police station for 25 years. However, the building is too small to accommodate the personnel, equipment and storage needs of a modern police department. The building meets most common code standards except for ADA.

The General Comments below, highlight the deficiencies that are basic to a modern police station.

GENERAL COMMENTS:

The following are important programmatic spaces that are essential for a functional and well equipped police station headquarters:

- Administrative office and support space including areas sized for roll call, report writing and training (Photos No. 20, 21, 22 + 23).
- Area for dispatchers, equipment, kitchenette and toilet room (Photo No. 21, 24 + 25).
- Areas for the storage of documents and other equipment and supplies (Photo No. 26, 27, 28, 29 + 30).
- Sallyport dedicated to detainee transfer exclusively and directly connected to booking holding (Photo No. 31, 32, 33 + 34).
- Vehicle bay assigned as impound.
- Fully accessible booking and sight and sound separate cell blocks, interview room and bail room (Photo No. 9, 35, 36, 37 + 38).
- Bulk and small evidence room with separate narcotics and valuables space; evidence lockers and work space.
- Dedicated armory
- Locker rooms associated with toilet/showers and not off path of egress (Photo No. 18, 39, 40 + 41).
- Area for general storage of items
- Area for network head end (Photos 42 + 43)
- Areas for Mechanical, Electrical, Plumbing and Fire Protection systems (Photos No. 44, 45, 46, 47 + 48)



Photo No. 1



Photo No. 2



Photo. No. 3



Photo No. 4



Photo No. 5



Photo No. 6



Photo No. 7



Photo No. 8

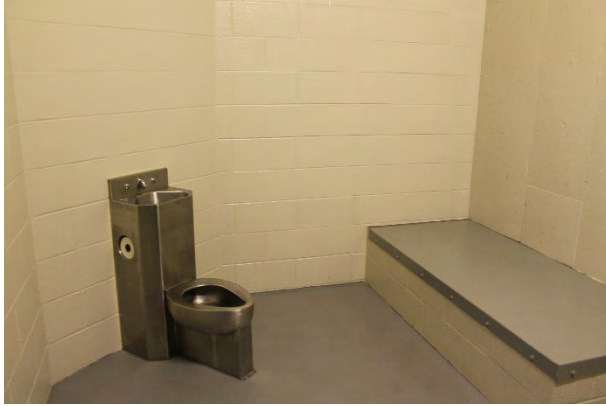


Photo No. 9

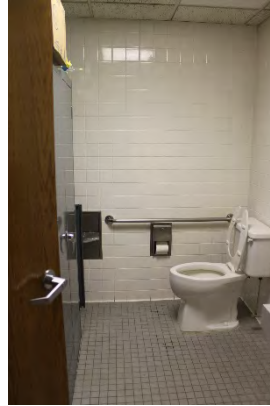


Photo No. 10



Photo No. 11



Photo No. 12



Photo No. 13



Photo No. 14

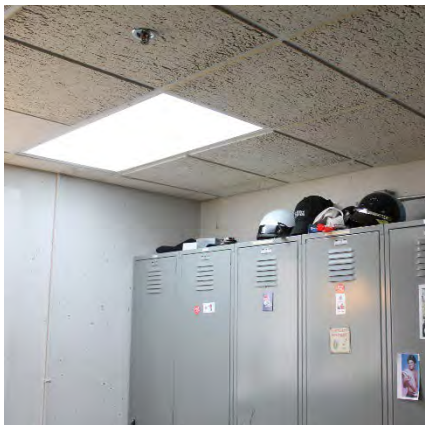


Photo No. 15



Photo No. 16



Photo No. 17

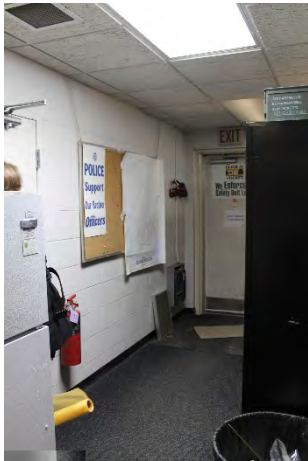


Photo No. 18



Photo No. 19

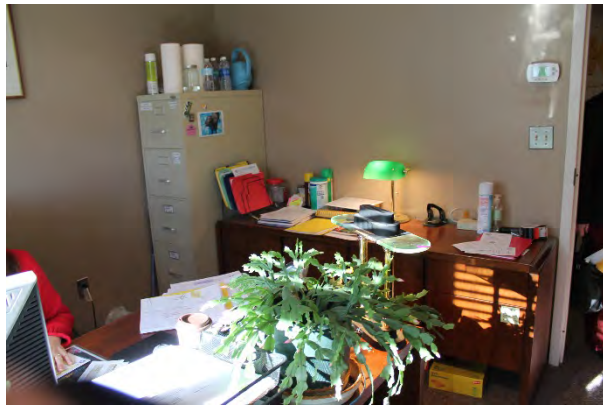


Photo No. 20

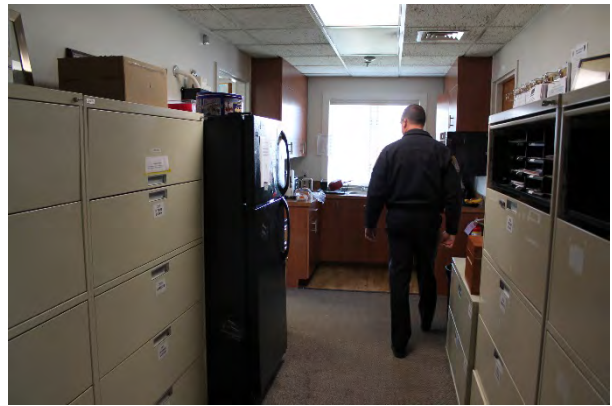


Photo No. 21



Photo No. 22



Photo No. 23

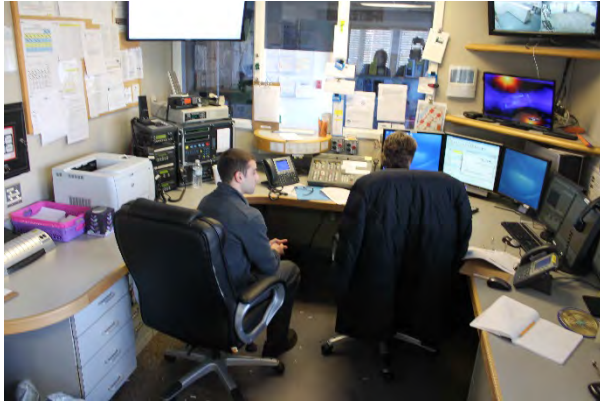


Photo No. 24



Phot No. 25



Photo No. 26



Photo No. 27

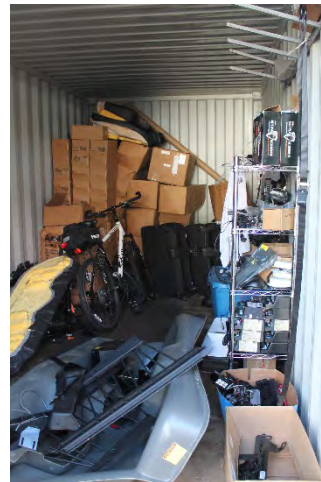


Photo No. 28

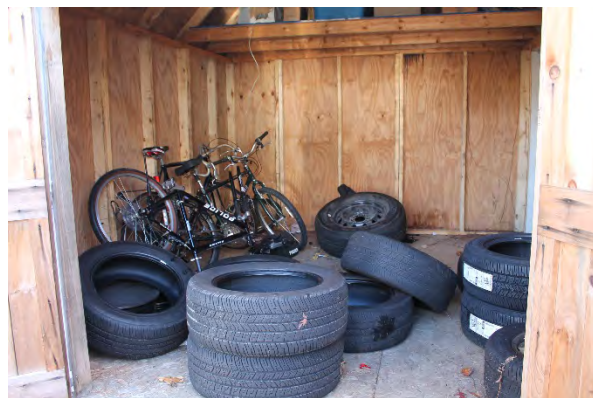


Photo No. 29



Photo No. 30



Photo No. 31



Photo No. 32



Photo No. 33

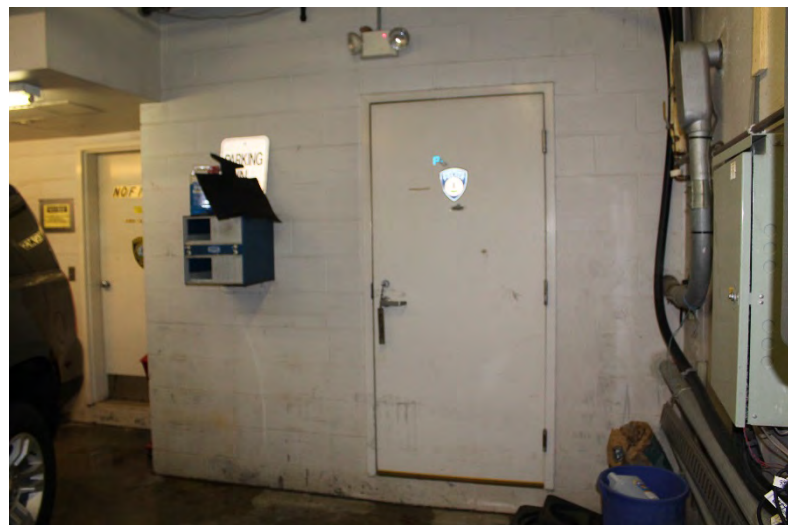


Photo No. 34

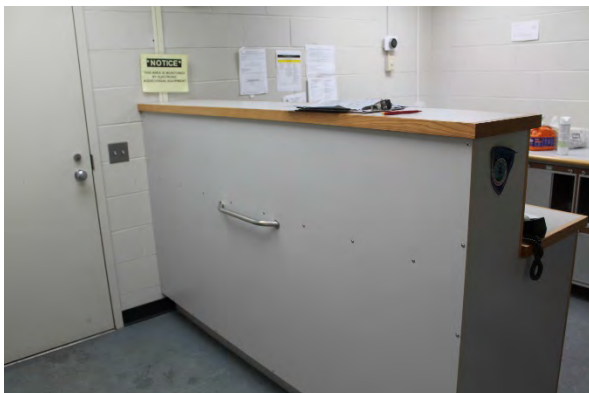


Photo No. 35



Photo No. 36



Photo No. 37



Photo No. 38



Photo No. 39



Photo No. 40

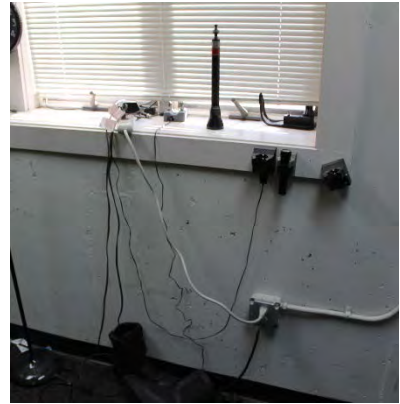


Photo No. 41



Photo No. 42



Photo No. 43



Photo No. 44



Photo No. 45



Photo No. 46



Photo No. 47



Photo No. 48



MEMORANDUM

DATE: March 3, 2015

TO: W. Eric Kluz, AIA, HKT Architects
Janet Slemenda, HKT Architects

FROM: Kevin M. Champagne, P.E., Pare Corporation

CC: Marc Gabriel, P.E., Pare Corporation
Andrew Chagnon, P.E., Pare Corporation

RE: **Structural Condition Assessment
Existing Police and Fire Stations
Boxborough, Massachusetts**
PARE Project No. 15017.00

Per your request, Pare Corporation (PARE) has prepared this memorandum to present the findings of a structural condition assessment of the existing police and fire stations located in Boxborough, Massachusetts. The purpose of this assessment was to document the building's structural systems and their overall condition. A review of the structural systems relative to building code compliance for potential future additions and alterations was also performed.

The findings herein are based upon observations made during a walkthrough of the buildings on February 18, 2015; a review of existing plans provided by the Town of Boxborough (Town); and a review of the relevant provisions of the Massachusetts State Building Code, 8th Edition, which adopts the 2009 International Existing Building Code (IEBC) and 2009 International Building Code (IBC) by reference. The walkthrough was conducted with representatives of HKT Architects (HKT) and was cursory in nature to generally identify framing configurations, lateral load (wind, seismic) resisting systems, and overall condition of the structure. No destructive investigation or investigation for the presence of hazardous materials was performed.

EXISTING CONDITIONS

Police Station

The police station is a two-story structure constructed in the late 1980s/early 1990s. The exterior cladding is clapboard siding with wood stud walls. Interior partition walls are generally wood at the main level and reinforced concrete masonry unit (CMU) in the lower level.

- In general, the visible portions of the police station's structural systems are in good¹ condition.
 - Minor shrinkage cracking was observed along the sally port concrete slab-on-grade.

- Lower level and foundations: Concrete slab-on-grade with exterior concrete foundation walls.
- Main Level: Concrete floor planks with topping supported on interior solid-grouted CMU walls and exterior concrete walls.
- Roof: Asphalt shingle roof with plywood supported by wood trusses spaced 2 feet on-center. The trusses span between exterior wood stud bearing walls.
- Lateral load resisting system: Lateral load resisting systems are not clearly identified on the existing plans. The concrete planks and plywood sheathing likely act as horizontal diaphragms. The reinforced CMU walls and wood stud walls likely act as shear walls.

Fire Station

The fire station was originally constructed in the late 1950s/early 1960s with an addition constructed in the late 1970s/early 1980s. The exterior cladding along the front of the building is brick veneer with CMU back-up. Along the back of the building, the exterior wall consists of single-wythe CMU block. Interior partition walls are a mix of wood stud and CMU. The west side of the building (vehicle storage) is single-story with a flat roof. The east side of the building (administrative/training rooms) is two-story with a pitched roof.

- In general, the visible portions of the fire station's structural systems are in fair² condition overall.
 - The concrete slab-on-grade within the fitness room is in poor³ condition with observed pitting and cracking.
 - The single-wythe CMU block along the rear of the building is in fair condition with observed water damage to the block and mortar joints.
 - The small wood-framed boiler room roof along the rear of the building is in fair-to-poor condition with extensive water staining observed.
- First floor and foundations: Concrete slab-on-grade and exterior concrete foundation walls. The below-grade foundations were not visible.
- Administrative/Training Room second floor: Wood floor joist with timber planking.
- Vehicle Storage Roof: Flat membrane roof with metal deck supported by steel bar joists. The joists are supported by load-bearing CMU.
- Administrative/Training Room Roof: Pitched roof with asphalt shingle and timber planking. The timber planking is supported by wood rafters spanning between exterior walls.
- Lateral load resisting system: Lateral load resisting systems are not clearly identified on the existing plans. The metal deck and timber planking likely act as horizontal diaphragms. The CMU walls and partitions likely act as shear walls.

BUILDING CODE REVIEW

Police Station

HKT Architects has indicated that the Town is considering an addition at the rear of the existing building. Due to roof lines and pitches, PARE understands that the addition may be structurally attached to the existing building. A structurally attached addition will require that the existing building be analyzed for code-prescribed lateral loads and retrofitted as required. It appears that the existing CMU shear walls are reinforced; additional reinforcement could be added if necessary. Additional structural hardware (e.g. hold-downs and tension ties) and plywood nailing would likely need to be added to the wood-framed walls to increase their shear capacity. If the new roof lines add additional load to the existing trusses, they may require reinforcement such as installing additional “sistered” 2x framing to existing truss members.

One potential alternative to retrofitting the wood structure is to partially demolish the building down to the main level (concrete plank floor). Then the wood walls and roof structure would be re-constructed to resist current code-prescribed loads.

Fire Station

If significant structural alterations (e.g. new openings in CMU walls) are made to the building, then the existing building will need to be analyzed for code-prescribed lateral loads. Based on existing plans for the addition and the vintage of the original structure, the existing CMU walls are likely unreinforced and would require extensive retrofitting to meet current code. The wood roof structure above the training room would require installation of new structural hardware (e.g. hurricane ties and hold-downs) and a plywood overlay to the roof sheathing. This retrofit work will add significant cost to the project.

Continued use of this structure will also require repair of the existing exterior load-bearing CMU block. At the rear of the building, the block is “single-wythe” construction meaning that it serves as both the interior and exterior wall surface for the structure. During the site visit it was noted that block surfaces and mortar joints are deteriorated due to moisture. This is a common problem with single-wythe construction as it requires reapplication of a sealing agent to the exterior face of the CMU every few years to limit water infiltration. Based on the level of deterioration, it is likely that some re-pointing and partial removal/replacement of CMU block would be required. The Town may also want to consider installing a veneer or rain-screen along the exterior face of the block to protect it from the elements.

ASSESSMENT LIMITATIONS

This structural assessment is meant only as a guide to understanding the current condition of the buildings. It is not an airtight assessment. This was a visual investigation, general in nature, limited to reasonably safe and accessible portions of the building. Destructive investigation (e.g. removal of finishes) was not performed, and not all conditions were visually accessible. The assessment is

based on general observations, reasonable assumptions, professional judgment, and experience with similar structures.

A structural analysis of the existing building was not performed as part of this assessment. Except as otherwise noted above, the exposed structural elements are typically in fair-to-good condition and appear capable of supporting the existing loads.

Please feel free to contact me with any questions.

- Kevin Champagne, P.E.
Pare Corporation

Attachments
Photographs

¹*Good:* Structural elements have little to no observed deterioration and can perform their intended function. Steel members may have some light rusting. Concrete and masonry surfaces are clean with little to no cracking or spalling. Wood is clean with no staining or mold. Plaster surfaces are firm and crack free.

²*Fair:* Structural elements have low levels of deterioration and can perform their intended function, but may have some minor reduction in capacity. Steel members may have localized, minor corrosion. Concrete and masonry elements may have hairline cracks and localized spalling, efflorescence, and staining, but surfaces are largely intact and clear. Wood members may have some checking and localized staining/mold, but appear sound. Plaster surfaces may have some staining and minor cracking at corners, but surfaces are firm.

³*Poor:* Structural elements show advanced section loss or deterioration and have moderate to large reductions in capacity. Steel members may have extensive corrosion or delamination. Concrete may exhibit large spalls and/or extensive efflorescence. Large cracks may be observed in concrete or masonry elements. Wood may be stained and/or damp with mold and/or small areas of rot. Vertical elements may be out of plumb and have lost veneer elements. Floors/roofs may have rotted/missing finishes and/or are easily deflected.



Photo 01 - Rear of Police Station



Photo 02 - First floor concrete planking at Police Station



Photo 03 - Shrinkage cracking along Police Station slab on grade



Photo 04 - Rear of Fire Station. Note deteriorated block and mortar joints.



Photo 05 - Inside Fire Station. Note deteriorated block and mortar joints.



Photo 06 - Water-damaged roof framing at Fire Station boiler room

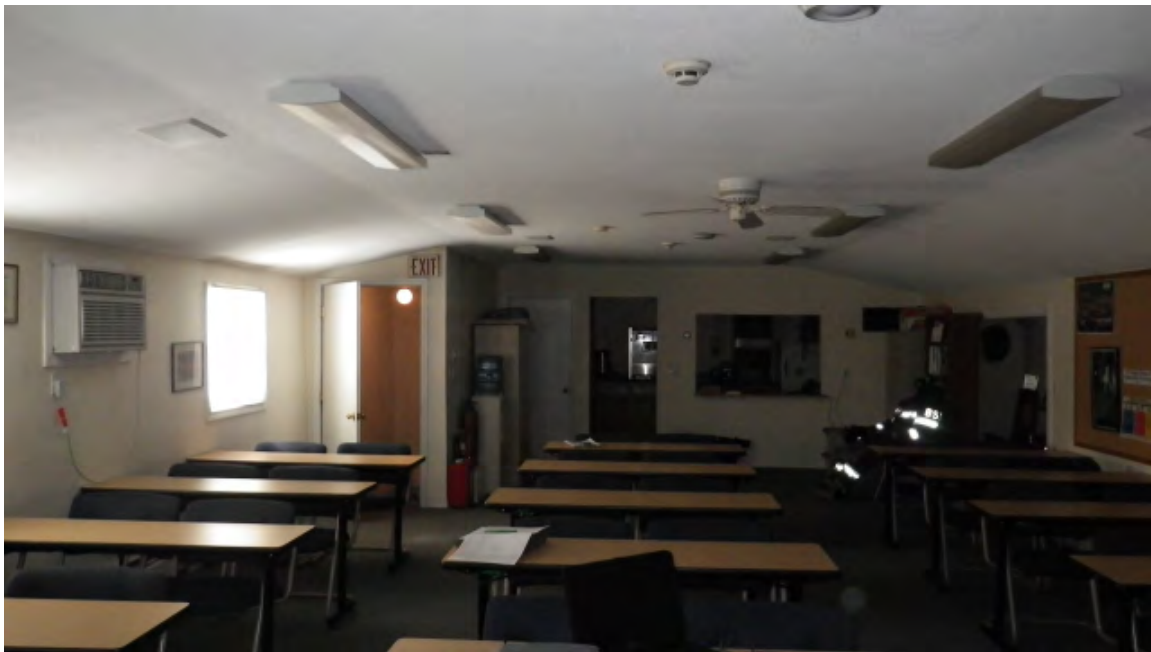


Photo 07 - View of 2nd floor training room



MEMORANDUM

DATE: March 3, 2015

TO: W. Eric Kluz, AIA, HKT Architects
Janet Slemenda, HKT Architects

FROM: Marc Gabriel, P.E., Pare Corporation

CC: Kevin Champagne, P.E., Pare Corporation
Andrew Chagnon, P.E., Pare Corporation

RE: **Existing Site Narrative Feasibility Study**
Existing Police and Fire Station
Boxborough, MA
PARE Project No.: 15017.00

Pare Corporation (PARE) is pleased to submit this Existing Site Narrative for the Police and Fire Station located at 520 and 502 Massachusetts Avenue respectfully in Boxborough, MA (the "Site"). The Site is located on two separate parcels totaling approximately 3.13 acres as shown on the Town of Boxborough ("Town") Assessors Map 10 Lots 172-1.0 and 175-0.0. They are bounded by Massachusetts Avenue with Blanchard Memorial School to the north, wetlands to the east and south and woods followed by residential development to the west. It is accessible via driveways off of Massachusetts Avenue. The Site is currently developed with a fire and police station, driveways, parking lots, exterior site utilities, landscaping and walkways. Information was obtained for the site and facilities from site observations completed on February 18, 2015, record documents and drawings, and data available through the Massachusetts Office of Geographic Information (MassGIS) online mapping and the Town of Boxborough WebGIS (WebGIS) system. Site observations were limited due to snow cover and snow piles during the February 18, 2015 visit.

Following this narrative we have provided comments as to the three proposed options provided to PARE for the Site. The options are C, F and G as shown in Boxborough Public Safety pdf provided by HKT Architects and dated January 20, 2015.

ZONING

The Site is zoned "Business (B)" for the Police Station and "Agricultural-Residential (AR)" for the Fire Station according to the "Town of Boxborough – Zoning District" map dated May 2014 and the "Town of Boxborough Zoning Bylaw" (Bylaw) dated May 2014. All direct abutting properties are zoned Business and Agricultural-Residential. Portions of the Site are located within Boxborough Zoning Overlay Districts which consist of the Wetlands and Watershed Protection District (W-District) and the Flood Plain District.

It is important to note that the Site is not within the Wireless Communications Overlay District and as such a wireless communications tower would not be allowed without a variance from the Bylaw. However, we understand from our discussions with Adam Duchesneau, Town Planner, that there is a request to revise the Bylaw to allow for public safety wireless communication structures outside of the overlay district in the upcoming 2015 Annual Town Meeting.



The required setbacks and dimensions according to the Bylaws within Zone AR and B are shown in the below table.

	Dimensional Requirements	
	AR District - Requirements	B District- Requirements
Min Lot Area (sf)	60,000	40,000
Min Upland Lot Area (sf)	20,000	20,000
Min Upland Lot Area % of Total Lot Area (%)	--	--
Min Lot Frontage (ft)	150	100
Min Lot Width (ft)	100	100
Min Front Setback (ft)	40	50
Min Side Setback (ft)	30	30
Min Rear Setback (ft)	40	40
Max Stories	3	3
Max Building Height (ft. to top of plate)	45	45
Max Lot Coverage (%) by Buildings, Structures and Impervious Surfaces	--	50
Floor Area Ratio	--	--
Min Open Space (%)	--	--

NATURAL ENVIRONMENT

Topography

The topography of the Site pitches generally from the police station being the high point to the south and south east towards the wetlands. The Site is graded as such that the stormwater pitches away from the buildings.

Soils

Existing geologic information was obtained from data produced by the National Resources Conservation Services website. The site is classified as 'Hinckley Loamy Sand' soils with 3 to 8 percent slopes (Map Unit 253B). These soils are typically excessively drained soils with a depth to bedrock at greater than 65-inches and a depth to seasonal high water table greater than 5 feet. These soils can be located on side slopes on terraces, escarpments, kames, and eskers. An in-depth geotechnical and soil evaluation will need to be performed to properly design foundations for future building improvements, drainage improvements and subsurface septic system design.

Regulated Areas

Review of the WebGIS data layers shows that there are wetlands located to the south and southeast side of the Site. The wetland areas are protected by a 100-foot buffer zone under both the State Wetlands Protection Act and the local wetland regulations. The 100-foot buffer zone is known as the Adjacent Land Resource Area (ALRA) in Boxborough which currently is where portions of the existing fire station and parking lot are in. The local wetland regulations prohibit the following items which would be specific to building improvements: permanent structures (e.g. buildings, garages, etc...) in the ALRA, parking lots in the ALRA, disturbance of any existing vegetation in the 50-foot buffer zone and work in an Adjacent Land Resource Area which supports documented rare species. Additionally, the northeast corner of the Site shows that a portion of it contains a Natural Heritage and Endangered Species Program (NHESP) mapped habitat. We would recommend further conversations with the Conservation Commission on future building and site improvements and if these activities could be permitted within the ALRA. Further review and delineation of the wetlands will be required for design as well as further coordination with NHESP.

According to the Flood Insurance Rate Maps for Boxborough available through FEMA (Federal Emergency Management Agency), this Site is located partially in a Zone AE. The south and southeast portion of the Site is within this zone. A Zone AE is defined by FEMA as a special flood hazard area subject to inundation by the 1% annual chance of flood (100 year flood). With this zone there are limitations to structure additions and the raising of site elevations due to the restrictions in flood storage that could be created. Additional survey and study would be required to confirm the site elevations as they pertain to the Zone AE elevation.

INFRASTRUCTURE

Parking and Driveways

Vehicular access to the site is available from Massachusetts Avenue via two bituminous concrete driveways which appear in poor condition (Picture 1). The driveway for the police station is located northwest of the building. The driveway for the fire station is located north of the building and extends over the majority of the Site's frontage. There are no traffic signals at either driveway entrances.

A bituminous concrete sidewalk exists along the north side of the property along Massachusetts Avenue. Concrete sidewalks and an accessible curb ramp allow access to the police station on the west side. The concrete sidewalks appear to be in good condition (Picture 2). An accessible parking spot and bituminous concrete driveway allow access to the north side of the fire station.

Parking for the buildings is located directly adjacent to them and along the south and west perimeter of the paved parking lots. A total of 44 parking spots currently exist onsite based on counts provided by HKT.

Future parking space dimensions are required per the Bylaw to be 10' X 20'. Accessible parking spaces would be required to meet the minimum requirements of 521 CMR Architectural Access Board. Coordination with the Town will be required to determine the quantity of parking required as the Bylaw does not have the use of this facility specifically covered (e.g. emergency services).

Utilities

Information regarding the exiting utilities was obtained for the Site and building through site observations, and record documents provided by the Town.

Drainage: Stormwater does not appear to be currently managed or treated on the site. It appears that stormwater sheets directly from paved surfaces to wetland areas, however, confirmation on this was not possible due to the existing snow piles (Picture 3). Additionally, existing plans indicate a swale along the west side of the Site that is directing stormwater to the wetlands along the south side of the Site. Future site and building improvements would likely require the mitigation and treatment of stormwater flows from the building and the Site. We would recommend that the Town provide all available record information on the Site's existing drainage system as well as any information on the drainage system in Massachusetts Avenue. The proposed drainage improvements will be required to meet the Massachusetts Department of Environmental Protection most current Massachusetts Stormwater Handbook.

Septic System: The sewer service for the police station currently exits the building to the south to a septic tank, then distribution box and ultimately to a leaching pit which is located south of the police station. Sewer manhole structures were observed during the site visit south of the police station. The sewer service for the fire station currently exits the building in the southeast corner, then to a septic tank and ultimately to a leaching field south of the fire station.

It is unknown as to where the interior floor drains within the garage bays, sally port and utility rooms discharge to or how they are treated prior to discharge (Picture 4). Treatment of the floor drains prior to discharging to a tight tank could be required depending on the proposed future building improvements.

Future building improvements would require an upgrade to the existing septic systems to be compliant with the latest Title V requirements (310 CMR 15).

Water: Water is currently supplied from an onsite well. The well is located between the fire and the police station. The service to the police station is shown to be a 1" PVC on record plans. The size of the service to the fire station is unknown. A pond is located along the west side of the property with what appears to be an existing dry hydrant connection to it. Future building improvements and water demands will require that the water system be further analyzed to determine if the existing well is adequate for both domestic and fire protection services.

Electric: Electricity is operated by Littleton Municipal Electric Light Company and serviced via overhead wires. The service connects to the buildings from Massachusetts Avenue. A CAT generator is located south of the police station (Picture 5) and an additional generator appears to be on the west side of the fire station. Future building improvements would require that the existing system be located and analyzed for capacity. Coordination should occur with the utility company regarding any service improvements.

Natural Gas: The buildings are currently serviced by natural gas which is operated by National Grid Gas. Future building improvements would require that the existing system be located and analyzed for capacity. Coordination should occur with the utility company regarding any service improvements.

SITE OPTIONS: Site Option C – Reuse Police Department Only; Site Option F – All New Construction (Police Station to West) and Site Option G – All New Construction (Fire Station to West)






These options propose demolition and new construction of the existing buildings except for Option C which proposes a reuse and renovation of the existing police station and a new fire station. All three options propose realignment of the driveway openings and reconfiguration of parking spaces. The Boxborough Public Safety PDF notes that a total number of future parking spaces for the shared facility would require 59 spaces. The options proposed total 57, 52 and 49. We would recommend confirmation with the Town that this meets both their parking requirements and the needs of the facility.

The west driveway opening is proposed partially in front of the adjacent privately owned parcel and running immediately adjacent to the side property line. This driveway layout would likely require a shift in alignment to avoid any concerns with the abutter and grade changes. Additionally, the new parking layouts do not allow for a pass through style garage for the fire station which if included would likely reduce the parking count. Total parking count for option C and F will require 3 ADA compliant spaces in which the access aisles for the third space may cause a reduction in total parking count.

The three options propose work within the 100-foot buffer zone otherwise noted before as the ALRA. The proposed buildings and parking lots in these options are prohibited activities or uses as defined in the regulations within the ALRA. The work would also require disturbance of existing vegetation within the 50-foot buffer zone, for the future stormwater management system, which is also prohibited. Lastly, the ALRA supports documented rare species and as such the work within the ALRA would be prohibited. Further coordination with the Conservation Commission would be required to determine if these activities could be permitted.

The three options propose double stacked parking areas along the east side of the Site near or within the NHESP mapped area. This would require permitting and confirmation from NHESP whether it is considered a "Take" or not.

These options would require the relocation of the on-site well and the installation of a new Title V compliant septic system and new drainage system that is in compliance with the Massachusetts Stormwater Handbook. Additionally, relocation of electricity and gas would be required during the design process.

	<p>Picture 1: View of the poor condition of the bituminous concrete driveway along the west side of the police station.</p>
	<p>Picture 2: View of the sidewalks along the west side of the police station.</p>
	<p>Picture 3: View of the west side of the fire station from the driveway behind the police station.</p>
	<p>Picture 4: Trench drain system within fire station garage.</p>
	<p>Picture 5: Generator to the south of the police station.</p>

COST ANALYSIS

The goals for this Public Safety Space Needs Assessment study included development of an estimated total project cost budget that can be used by the Advisory Group and Town to discuss what next steps should be taken. Total project cost is a combination of the cost for construction (hard costs) and administrative costs borne directly by the Owner (soft costs). Three options were selected for cost development: Options C, F and G. A detailed outline of the estimated probable costs for these schemes is on the following pages. Below is an explanation of how these costs were arrived at.

Hard Costs

At such an early phase in a project, it is impossible to establish a comprehensive budget without a specific building design. Instead, historic square foot costs for construction for similar projects are used to establish an estimate of probable hard construction costs for the building, including demolition, renovation and new construction. Site costs are estimated as a percentage of building construction costs. For a previously developed site such as this with minimal complicating issues (i.e. no anticipated ledge, extensive grading and retainage, etc.) site development costs are estimated at 10% of the cost of building construction. To these figures, a design and estimating contingency is added to cover the cost of items that cannot be foreseen at this time without a more defined design. Currently the design and estimating contingency is carried at 20% of the construction cost. Typically this contingency is reduced as a project progresses. A 10% contingency is typical at the completion of schematic design and drops to 5% at the completion of design development. Finally, these costs are escalated based to the anticipated mid-point in construction. In determining the mid-point of construction, the following assumptions were made:

- Funding for design and construction would be sought at the autumn 2015 Town Meeting.
- Design would last 6 months from November 2015 to April 2016.
- Construction would begin June 2016.
- Construction of Options C and F would be 14 months. Construction of Option G would be 18 months to allow for construction inefficiencies due to phasing.

Soft Costs

The estimated soft costs on the following page include a list of administrative costs typical of a project such as this. Architectural and engineering fees and owner's project management fees are typically estimated as a percentage of the construction cost. Other costs are based on historical figures for similar projects.

Particular attention was paid to developing temporary relocation costs for this project. Rental costs for temporary trailers and the purchase price for a tent for apparatus are based on quotes from companies that provide these services. Quotes for tent rental were also sought, however it appears more cost effective to purchase a tent which could either be repurposed by the Town or later sold. We understand though that no Town land is available at this time that could accommodate these temporary structures. Moving forward, other options for temporary facilities could be explored such as rental of available vacant commercial office space in Town. The final building design may also be arranged in a manner to facilitate phasing in such a way that temporary facilities would only be required for one department during construction. Option G comes close to meeting this goal as the fire department could remain in the existing building for the first phase of construction while the new apparatus bays are constructed then move apparatus in while the rest of the facility is built. This would eliminate the need for a tent for apparatus. Unfortunately the current layout would require fire department administration and living space to be accommodated in temporary facilities during the second phase of construction.

Owner's Contingency

The Owner's contingency is carried as a line item to cover changes that are initiated at the Owner's option or latent conditions such as unforeseen circumstances. Examples of unforeseen circumstances might be additional hazardous waste removal or boulder removal. This contingency can also cover changes that the Owner chooses to initiate. Upgrading to a better grade of equipment or deciding to change a spatial arrangement during construction are but two examples.

Total Project Costs

The combination of hard and soft costs yields total project costs. Total project costs for the three selected options are outlined below:

	Option C	Option F	Option G
Estimated Total Probable Project Costs	\$24,024,664	\$25,607,328	\$25,782,015

One potential variable to this budget is if there should be a significant change in the economy (such as a major rise in fuel costs) which could affect the base cost and the escalation contingency. Another variable is timing as a delay to the project would also affect the total cost.

BOXBOROUGH PUBLIC SAFETY ESTIMATED PROBABLE COSTS

	Option C - Reuse Police Station; Major Renovations + Additions	Option F - All New Construction	Option G - All New Phased Construction (Flipped Scheme)	Comments
Square Footage				
Demolition	8,469	13,082	13,082	
Major Renovations	4,613	0	0	
Additions / New Construction	30,354	34,967	34,967	
Total Building Square Footage	34,967	34,967	34,967	
Estimated Hard Building Costs				
Demolition (\$15 per square foot)	\$ 127,035	\$ 196,230	\$ 196,230	
Major Renovations (\$200 per square foot)	\$ 922,600	\$ -	\$ -	
Additions / New Construction (\$375 per square foot)	\$ 11,382,750	\$ 13,112,625	\$ 13,112,625	
Site Costs (10% of construction costs)	\$ 1,230,535	\$ 1,311,263	\$ 1,311,263	
Premium for Phased Construction	\$ -	\$ -	\$ 120,000	Assumes \$30,000/month additional general conditions for additional 4 months
Subtotal	\$ 13,662,920	\$ 14,620,118	\$ 14,740,118	
Escalation to Mid-Point Construction - 4.5%/yr for 2015 and 2016; 3.8%/yr for 2017 on	\$ 1,257,330	\$ 1,345,416	\$ 1,407,432	Assumes construction starting in June 2016. Options C + F assumes 14 months construction. Option G assumes 18 months
Design and Estimating Contingency - 20%	\$ 2,984,050	\$ 3,193,107	\$ 3,229,510	
Subtotal	\$ 17,904,300	\$ 19,158,641	\$ 19,377,059	
Construction Contingency - 10%	\$ 1,790,430	\$ 1,915,864	\$ 1,937,706	
Estimated Total Probable Hard Construction Costs	\$ 19,694,730	\$ 21,074,505	\$ 21,314,765	
Estimated Soft Costs				
Architectural + Engineering Fees	\$ 1,790,430	\$ 1,915,864	\$ 1,937,706	10% of construction cost
Owner's Project Manager (OPM) Fees	\$ 447,608	\$ 478,966	\$ 484,426	2.5% of construction cost
Prequalification	\$ 7,500	\$ 7,500	\$ 7,500	Required at \$10M construction cost or at the Town's discretion
Printing Costs + Advertisement	\$ 15,000	\$ 15,000	\$ 15,000	
Legal Costs	\$ 25,000	\$ 25,000	\$ 25,000	
Financing	\$ -	\$ -	\$ -	To be determined
Commissioning	\$ 25,000	\$ 25,000	\$ 25,000	Assumes building not pursuing LEED
Testing	\$ 50,000	\$ 50,000	\$ 50,000	
Furniture, Fixtures + Equipment (FF+E)	\$ 246,649	\$ 246,649	\$ 246,649	Assumes office equipment at \$5/sf and furniture at \$8/sf; square footage excludes apparatus, equipment and detention
Communications (dispatch, radio, antennas, etc.)	\$ 300,000	\$ 300,000	\$ 300,000	
Permitting	\$ -	\$ -	\$ -	Assumes Town will waive permitting fees
Abatement/HazMat Allowance	\$ 25,000	\$ 25,000	\$ 25,000	
Clerk of the Works	\$ 120,000	\$ 120,000	\$ 154,286	Options C + F assumes 14 months construction. Option G assumes 18 months
Additional Services (survey, geotech, HazMat consultant, energy modeling, FF+E design, etc.)	\$ 75,000	\$ 75,000	\$ 75,000	
Utility Company Back-charges	\$ 50,000	\$ 50,000	\$ 50,000	
Temporary Relocation and Moving Costs:				
Transition Costs (movers to and from temporary building)	\$ 20,000	\$ 20,000	\$ 20,000	
Temporary Building (rental of trailers for offices/living quarters) - \$6500/month plus delivery, installation, teardown and return fees	\$ 204,000	\$ 204,000	\$ 200,750	Options C + F assume temporary facilities for both departments through duration of construction. Option G assumes temporary facilities for PD admin through duration of construction and FD admin for 9 months.
Temporary Building (purchase of tent for apparatus)	\$ 129,000	\$ 129,000	\$ -	
Temporary Building Infrastructure/Site Services to Trailers/Tent (water, tight-tank, generator, antenna, computer, phone, etc. connections)	\$ 100,000	\$ 100,000	\$ 100,000	
Temporary Building - Site rental costs	\$ -	\$ -	\$ -	TBD
Prisoner processing and monitoring in adjacent community during construction	\$ -	\$ -	\$ -	TBD
Estimated Total Probable Soft Costs	\$ 3,630,187	\$ 3,786,979	\$ 3,716,317	
Total Project Costs				
Estimated Total Probable Hard and Soft Costs	\$ 23,324,917	\$ 24,861,484	\$ 25,031,082	
Owners Contingency - 3%	\$ 699,748	\$ 745,845	\$ 750,932	
Estimated Total Probable Project Costs	\$ 24,024,664	\$ 25,607,328	\$ 25,782,015	

CONCLUSION

The current Boxborough Fire Station was built over 50 years ago for a volunteer fire department. Two addition and renovation projects over the years have attempted to meet changing needs as the department has grown over the years. However, life safety codes have changed significantly, handicapped accessibility requirements have been expanded and fire safety codes have been considerably upgraded as well over the years.

Today, the Boxborough fire station is staffed full-time by professional firefighters with a complement of call firefighters responding in emergencies. As in many towns, Boxborough Fire Department is experiencing a decline in the number of available call firefighters as more and more residents travel out of Town for their regular jobs. In the future, it will be necessary to staff the department with more full-time firefighters to meet the public safety needs of the Town and the building infrastructure will need to accommodate this changing organization. These staffing changes, sizes of fire apparatus, firefighting methods and many other factors have all contributed to a facility that is out of date and too small to serve Boxborough Fire Department's current and projected needs. For those who have studied the current building, there is little disagreement that a new facility is required.

The Boxborough Police Station was built 25 years ago. The facility lacks many spaces typical in a modern police station. Police officers must process evidence with chemicals on the same table used by staff for eating lunch. Technological changes affecting dispatch operations have been difficult to accomplish in the existing limited footprint and will continue to challenge the department. Officers lack adequate storage space for modern gear and equipment. Officer and suspect safety is hindered by inadequate detention processing facilities. The police station, like the fire station, does not serve the Boxborough Police Department's current and projected needs.

This study has laid the groundwork for a new public safety facility for Boxborough by assessing the existing stations and site, defining the departments' current and future space needs, determining the existing site would be adequate for the needed facility with some compromises and developing an estimated probable total project cost. Many questions remain to be answered though such as:

- What would the new public safety facility look like? What would be the best building systems for the facility?
- How can the wetlands requirements be addressed given the facility and parking requirements on this small site?

- Can the new facility be designed in such a way to facilitate phasing and minimize temporary relocation costs for one of the departments?
- Could temporary facilities during construction be found in any vacant commercial properties? If not, what commercial land is available to rent for temporary trailers?
- Will the citizens of Boxborough support the cost of the project?

On March 17, 2015, the Space Needs Advisory Group met to review the progress of this feasibility study and discuss what steps should be taken next. The discussion that evening made it clear to all that answering these and other outstanding questions should be the goal of a more in-depth feasibility study. Most notably, the Group felt that the estimated probable total projects costs greatly exceeded what Boxborough residents would approve at annual Town Meeting. Still, it was clear to everyone that the current facilities are inadequate to meet the departments' needs and that something must be done.

The Space Needs Advisory Group decided to request funding for an extension of the feasibility study at the May annual Town Meeting. If funding is approved, the Space Needs Advisory Group, in consultation with the Board of Selectmen, would determine an upper and lower bound for Total Project Costs. HKT Architects would then work with the police and fire departments to develop a compromise building program that would reduce the overall building square footage, and resultant construction costs, to fit within the budget range. Building design options would be developed, refined and eventually one would be professionally cost estimated. Results of the study extension would provide the Space Needs Advisory Group with more definitive answers and a clearer understanding of the total project costs which would be requested of Boxborough residents at a later Town Meeting.

APPENDICES



MEETING MINUTES

MEETING MINUTES

Project: Boxborough Public Safety Space Needs Assessment
Meeting Date: December 17, 2014
Meeting Number: 01 – Kick-off / Visioning
Meeting Location: Boxborough Town Hall
Report By: Amy J. Dunlap
Job No: 21411

Attending:

- ☒ Adam L. Duchesneau (ALD), Town Planner
- ☒ Amy Dunlap (AJD), HKT Architects, adunlap@hktarchitects.com
- ☒ Nancy Fillmore (NF), Planning Board
- ☒ Les Fox (LF), Board of Selectmen
- ☐ Charlene Golden (CG), Conservation Committee (Alternate)
- ☒ James Gorman (JG), Board of Selectmen
- ☒ David Lindberg (DL), Building Inspector
- ☒ Maria Neyland (MN), Citizen
- ☒ Warren O'Brien (WO), Sergeant, Boxborough Police (Alternate)
- ☐ Deborah Robinson (DR), Citizen
- ☒ Warren Ryder (WR), Police Chief
- ☒ Jeff Scott (JS), Finance Committee
- ☒ Janet M. Slemenda (JMS), HKT Architects, jslemenda@hktarchitects.com
- ☒ Hoff Stuart (HS), Conservation Committee
- ☒ Randolph White (RW), Fire Chief

Item:

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- 1.01 WR opened the meeting explaining the history of the project to date. Members of the committee took turns introducing themselves.
-
- 1.02 JMS introduced the design team and gave a brief description of the team's experience
-
- 1.03 JMS facilitated the Visioning Session portion of the meeting. The Visioning Session included an overview of the session process, questions, a review of responses and open discussion. The following items 1.04 through 1.08 document the questions asked and the responses attendees wrote on individual post-it notes. Responses have been recorded as they were written with the exception that abbreviated words have been written out for the readers' understanding.
-
- 1.04 Question 1: What do you see as the best outcome for this study?
- One combined building for Police, Fire & Ambulance
 - A combined Police – Fire Facility
 - State of the Art Public Safety Building
 - New Joint Public Safety Building
 - Public Safety Building
 - A vision that the committee agrees upon and put forth to the Town
 - Clear statement of the problems and need
 - A clear understanding of the needs both current and in the future
 - Well defined concept- meeting basic site and operational constraints
-

-
- Agreement among all interested parties on basic site, allowable uses and bounds
 - New Fire Station, renovate and add onto Police
 - Within financial means of City of Boxborough
 - Set of options with costs and timeline that solve problem
 - A building containing space for the Community Events, Meetings, etc.
 - Community Room
 - Public access to building
 - New single complex on different site
 - Parking and circulation at the site are maximized
 - A Plan B – if forced to acquire additional land to proceed
 - A structure that the community can be proud of
 - Present many options; should not be a foregone conclusion
 - Space needs of Police and Fire are met
 - Meets Police Department needs
 - Meets Fire Department needs
 - Safety for all
 - Efficient building
 - Better space use
 - Structure(s) that fit into surrounding area (scale)
 - Green Energy
 - Rough Order of Magnitude (ROM) cost through detailed design & construction
-

1.05 Question 2: What do you see as the biggest challenge(s) for this study?

- Cost of project
 - Funding and town support
 - Funding project
 - Tax payer support
 - Cost/Affordability
 - Money
 - Cost
 - Keeping the cost reasonable
 - Cost
 - The ability to 'sell' the project to the community
 - Coming to a persuasive presentation for the Town Meeting
 - Convincing arguments of need
 - The extreme limitations of the building site
 - Agreement on site usage issues, e.g. compliance with Wetlands Protection Act
 - Site restrictions
 - Site access and restrictions
 - Land and wetland constraints
 - Wetlands
 - Wetlands impact
 - The issues around the current site
 - Site issues
 - The wetlands on the site
 - Varied elevations
 - Meeting wetlands setbacks
 - Unified design if old buildings remain
-

-
- Working in a work zone
 - Arriving at a building meeting operational requirements at acceptable cost
 - Finding the best solution that is agreed upon
 - Accommodation of both vehicular circulation space and physical storage space
 - Meeting expectations
-

1.06 Question 3: How does the current layout of the site impact the two functions on the site?

- Parking is limited
 - Parking problems
 - Less than ideal egress for police vehicles
 - Area is not flat
 - The differences in land elevation
 - Grading between buildings
 - Grade and elevations forces separate buildings today
 - Flow of fire apparatus is not smooth and efficient
 - Seems to dictate location of apparatus bays
 - Size is limited
 - Space constraints could cause delays in response
 - Limits parking and vehicle maneuvering space
 - Building size is limited
 - Coordination between Police and Fire is hampered by separate facilities
 - Makes expansions to the rear difficult
 - No room to grow or add additional capability even in current model
 - Prisoner, victim/witness cross traffic
 - Potential sharing of common space not feasible
 - Works against a concept of unified public safety
 - Access to Route III could be a challenge
 - Zoning issues
 - The adjacent wetlands
 - Both are too close to wetlands
 - 100' Buffer
 - Traffic congestion with the school across the street
 - Both have to be cautious of the school
 - No good public space to enhance public interaction with either Police or Fire
 - Parking for public and visitors
-

1.07 Question 4: What are one or two critical details that we need to know about this project?

- What does the Fire Department really need
 - What does the Police Department really need
 - Codes, Apparatus, Equipment constantly changes. The building needs to be flexible
 - Must fit the needs of today and future uses
 - It provides for the future growth of the Police/Fire Departments
 - Projected site of Police Department and Fire Department over next 20 years
 - Outcome should not be a foregone conclusion
 - Keep an eye on cost considerations
 - Cannot cost a lot
 - Concern over increase in taxes
 - Don't need something fancy
-

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- Must be able to fit needed equipment for BOTH
 - Should include Community Room to engage wider population
 - How the parking space is used for overflow parking for school events
 - There is not enough on-site parking currently
 - Site layout is extremely impacted by adjacent wetlands and buffer
 - Is wetland use feasible if compensatory land can be identified
 - Safe distance for vehicles
 - Can't we do nothing
 - Urgency and timeline – equipment needs and drivers
 - Storage
 - Facilities are outdated
 - No reasonably plausible alternative; site exists to either relocate or split functions
 - It will be a centerpiece of the Town's infrastructure
 - What if we don't move forward with project
 - Community may not understand the needs – “But we are a small town”
 - It is a necessary project to provide top notch service to the Town
 - Town demographic is split between many-generational residents and relatively new residents - very different perspectives on utility and cost
-

1.08 Open discussion questions included:

- Other constraints - perhaps intangible in nature?
- Other Town efforts underway that may affect or influence the study?
- Other information about the Town that we should know?

A discussion of the open question topics raised numerous additional items of interest:

- Is there data on what other similar Towns have done (before and after statistics)? How do they make their decisions?
 - What if we do nothing? What is the cost of maintaining operations in the current buildings?
 - Decision process
 - Development on site?
 - Temporary Conditions – How do the departments continue to work in a work zone given the size of the site?
 - Aging populations – Has adequate money been put aside to cover the pensions of aging Town employees?
 - Master Plan Process – Ongoing
 - Maintain the rural character of Boxborough
 - Engaged Community
 - Aging population could benefit from a recreation/meeting/Community Room
 - Aging Population – Fixed Income
 - Debt service low and interest rates are low now (money is cheap)
 - Develop arguments to counter skeptics
 - Show the Town what will happen if we don't do anything – cost of maintaining operations – cost of building in the future
 - A veterinary dental clinic will be built on the adjacent parcel sometime in the next year
 - 250 unit housing development will bring 700 residents in the next several years. The intent is to break ground in May or June 2015. Some believe the
-

development could impact schools. School department has studied and does not believe infrastructure will be impacted. School population growth is flat.

- DPW will need to be addressed in the future years and will also face a wetlands issue.
- What is benefit to citizens?
 - A meeting room like Littleton?
 - A community meeting room exists in the library now. Does the Town need more? How will this one be different?
 - This community room's primary function will be as training and EOC for the departments. It will be available to the community when not in use by the Police or Fire Departments.

1.09 JMS and AJD briefly reviewed the programming process and work completed to date. HKT has met with Chief Ryder and Chief White as well as members of their departments to discuss programming needs. HKT toured the existing facilities as well to determine space needs. Data collected is compared with industry best practices to determine a working space program. Draft programming documents have been completed and are being refined based on feedback from the departments.

1.10 JMS explained the next step will be to test the building program on the site, developing conceptual site layouts. AJD reviewed the conceptual site layouts developed for the interview to show the range of potential options that will be explored.

Next Meeting to be held: Tuesday, January 20, 2015 at 7:00PM

Please contact HKT Architects if these minutes do not accurately reflect discussions.

Cc: All attendees

MEETING MINUTES

Project: Boxborough Public Safety Space Needs Assessment
Meeting Date: January 20, 2015
Meeting Number: 02
Meeting Location: Boxborough Town Hall
Report By: Amy J. Dunlap
Job No: 21411

Attending:

- ☒ Adam L. Duchesneau (ALD), Town Planner
- ☒ Amy Dunlap (AJD), HKT Architects, adunlap@hktarchitects.com
- ☒ Nancy Fillmore (NF), Planning Board
- ☐ Les Fox (LF), Board of Selectmen
- ☐ Charlene Golden (CG), Conservation Committee (Alternate)
- ☒ James Gorman (JG), Board of Selectmen
- ☒ W. Eric Kluz (WEK), HKT Architects, ekluz@hktarchitects.com
- ☒ David Lindberg (DL), Building Inspector
- ☒ Maria Neyland (MN), Citizen
- ☒ Warren O'Brien (WO), Sergeant, Boxborough Police (Alternate)
- ☐ Deborah Robinson (DR), Citizen
- ☒ Warren Ryder (WR), Police Chief
- ☐ Jeff Scott (JS), Finance Committee
- ☒ Janet M. Slemenda (JMS), HKT Architects, jslemenda@hktarchitects.com
- ☒ Hoff Stuart (HS), Conservation Committee
- ☒ Randolph White (RW), Fire Chief

Item:

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- 2.01 The primary purpose of this meeting was to review the programming documents and the initial conceptual design options.
-
- 2.02 Programming: AJD explained the programming documents divide spaces into four distinct areas including spaces that are shared by both departments, those used exclusively by either the Police or Fire departments, and the site requirements for both departments. Based on programming done with the police and fire departments to date, a combined facility would be approximately 35,000 gross square feet (gsf) in size. AJD explained that if separate police and fire facilities were to be built, the total square footage required would be higher as the 35,000 gsf takes advantage of efficiencies of sharing spaces such as a lobby, training/EOC room, conference room, wellness room, public toilets and mechanical and support spaces which would need to be duplicated in separate facilities.
- AJD explained that site requirements included 59 parking spaces which is an increase from the existing 44 parking spaces. The parking count is an idealized number based upon providing enough parking for personal and department vehicles at a shift change. The number also takes into account visitors to the facility, future staff increases, parking for call firefighters and department owned vehicles and equipment.
-
- 2.03 Options: AJD reviewed site constraints with the committee again. The existing sites are in different zoning districts with the police station site in the Business district and the fire
-

station site in the Agricultural/Residential district. Other site constraints taken into consideration in the options development included wetlands, flood zone, stormwater management issues, the protected species restrictions, location of the existing septic field and topography. For the purposes of concept development in this study phase, AJD explained that HKT used wetlands flagging information that was included in the 1989 construction documents for the existing police station and compared that with information from the Town's GIS database. Where the wetlands line differed, the more restrictive points were used. If the project moves forward, an updated site survey with updated wetlands flagging would be required.

- 2.04 AJD presented seven conceptual test fits for program and site. These included a stand-alone Police and Fire Stations, renovation and addition, and new combined facilities.

Option A demonstrated major renovations and additions to both the existing police and fire stations to create two stand-alone facilities. Major drawbacks to this scheme included police detention and dispatch facilities located on different levels (which restricts the ability of dispatchers to conduct required cell checks on detainees and forces an officer to be brought in to monitor detainees while in custody). In addition, apparatus bays would need to be split into two floor levels with an elevation difference of approximately six feet due to the location of the addition, existing floor elevation of the existing apparatus bays and the relationship to the grades at the street.

Option B also demonstrated major renovations and additions to both the existing police and fire stations, but created a single shared facility on the site. In this scheme, the existing fire apparatus bays are reused and added onto. The existing bays would be lengthened, but could not be widened to meet current standards. As a result, only the two new apparatus bays would be the preferred length and width.

Option C presented an option for demolishing the existing fire station entirely and renovating and adding onto the police station to create a new combined facility. The scheme met required size and spatial adjacency criteria for the facility and came close to the required parking count with 57 spaces. While the buildings are outside of the apparent 100' wetlands buffer line, parking and driveways do encroach on the 50' buffer. However, the amount of impervious surface on the site is no more than is existing.

Option D reused the police station only with major renovations and additions to create a single shared facility. In this scheme, the sally port entrance would be located at the rear of the police station on the lowest level. In order to keep detention and dispatch on the same level, dispatch would be located on the lowest level as would the public entrance. This forces the public entrance to the back of the site. While this entrance would be conveniently located to parking, it is remote from the street and creates difficulties for public wayfinding.

Option E demonstrated a completely new three level facility on the site. Both the existing police and fire stations would be demolished in their entirety. To create ideal adjacencies for the police and fire departments within a more compact three story facility, it was necessary in this scheme to place the entry lobby and training room on different floor levels which may present challenges for security when members of the public use the training room for meetings.

Option F also demolishes the police and fire stations in their entirety to create a new facility on two levels. This scheme met the required size and spatial adjacency criteria and came close to the required parking count with 52 spaces. The building does encroach on the 100' wetlands buffer and parking and driveways encroach on the 50' buffer.

Option G differs from all other schemes in that it flips the locations of the police and fire departments on the site. In this scheme, both existing buildings would be demolished and a new combined facility constructed with the fire department on the west side of the building and the police department on the east side of the building. A major advantage of this scheme is in the ability to phase construction. The fire department could remain on site while the police station was demolished and new apparatus bays constructed. The fire department could then use the apparatus bays while the existing fire station was demolished and the remainder of the facility constructed. The police department would require temporary facilities during the entire construction phase.

-
- 2.05 The committee discussed the pros and cons of the seven options presented. The committee questioned whether the added cost of phasing Option G might be outweighed by the savings in temporary facilities for the fire department during construction. Committee members also questioned whether other schemes might be phased and whether the departments could remain on-site during renovations to their existing buildings. JMS explained that all options that included reuse of existing facilities required major renovations to those facilities including complete reorganization of space and new building systems. Renovations of this magnitude will require locating the departments in temporary facilities off-site during construction. Committee members questioned whether it would be possible to provide temporary trailers on-site for the departments' use during construction. JMS explained that given the tight site, footprint of construction activities and the need for a contractor to have lay-down areas and trailers of their own, it would be difficult to provide any temporary facilities for the departments on site during construction.

The committee discussed which options they would like to pursue further. It was agreed that the options which reused the existing fire station were not worth pursuing as the compromises required to reuse the facility were too great. While the committee believes public opinion may be that reusing the existing police station will bring savings to the project, the committee wondered if that savings might be equal to the savings in temporary facilities with a phased approach shown in option G. Committee members also saw benefits to the new construction schemes including improved facility layout and spatial relationships. In the end, it was agreed that HKT would develop some preliminary conceptual project costs for Options C, F and G for the committee's review.

-
- 2.06 JG discussed the schedule required for Town Meeting. Warrant articles must be submitted by the third week in February, however, the articles may be modified until the end of March. JG noted the committee and Selectboard have not yet decided what they will be seeking in the warrant article. Options include seeking funding for design and construction, funding for design through construction documents or funding for a portion of design.
-
- 2.07 JG asked that ALD try to identify some sites in Town that might be used for temporary facilities during construction. If publicly owned land is not available, land may need to be rented from private owners. This cost will need to be factored into the total project cost.
-

2.08 The committee discussed how to begin educating the public and marketing the project. MN suggested the departments host an open house so the public could see the conditions of the existing facilities and hear about deficiencies first hand. The committee also discussed how to educate the public about the cost of doing nothing. In particular, if the project is not funded, the Town will need to face either repairing and/or replacing the existing facilities in the future. JMS explained that HKT's cost estimator is suggesting that construction costs may increase an average of 6% this year and next year and 3.8% annually thereafter. These figures can be applied to estimates to required upgrades on the existing facilities to demonstrate the burden to the Town in the future of doing nothing now.

2.09 Next steps include a review of buildings by structural and civil engineers with particular focus on Option C which included reuse of the Police Station.

Costs: HKT will develop costing for Options C, F and G for submission to the committee by the end of February.

Next Meeting to be held: TBD

Please contact HKT Architects if these minutes do not accurately reflect discussions.

Cc: All attendees

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MEETING MINUTES

Project:	Boxborough Public Safety Space Needs Assessment	Meeting Date:	March 17, 2015
Meeting Number:	03	Meeting Location:	Boxborough Town Hall
Report By:	Amy J. Dunlap	Job No:	21411

Attending:

- ☒ Adam L. Duchesneau (ALD), Town Planner
- ☒ Amy Dunlap (AJD), HKT Architects, adunlap@hktarchitects.com
- ☒ Nancy Fillmore (NF), Planning Board
- ☐ Les Fox (LF), Board of Selectmen
- ☐ Charlene Golden (CG), Conservation Committee (Alternate)
- ☒ James Gorman (JG), Board of Selectmen
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- ☒ Warren Ryder (WR), Police Chief
- ☒ Jeff Scott (JS), Finance Committee
- ☒ Janet M. Slemenda (JMS), HKT Architects, jslemenda@hktarchitects.com
- ☒ Hoff Stuart (HS), Conservation Committee
- ☒ Randolph White (RW), Fire Chief

Item:

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- 3.01 JG stated that a "placeholder" article has been placed on the Town Meeting warrant requesting additional funding to do a more in-depth study of the project, however that article may be revised based on decisions made at this meeting. JMS explained there are three options for funding requests at Town Meeting:
1. Request funding to continue the feasibility study process to further the conceptual design and refine cost. HKT recommends this path.
 2. Request funding to complete item #1 and to develop a chosen scheme through schematic design.
 3. Request funding to complete items #1 and #2 and to complete construction documentation and building construction through occupancy.
-
- 3.02 AJD reviewed the study process to date. There were six steps taken:
1. Space Needs Assessment consisted of meeting with the departments to determine their current and future needs, compare those to similar Towns and Best Practices and develop an ideal building program.
 2. A Kick-Off Meeting / Visioning Session was held so committee members could express their vision and concerns for the project. The meeting was televised so the public watch, establishing transparency in the process.
 3. Existing Conditions Assessments were performed by HKT Architects and civil and structural engineers to determine the physical and operational deficiencies of the existing buildings and what the implications are of potential reuse.
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4. Conceptual Designs test fit the ideal building program on the existing site looking at renovation and new construction options and determined that the site could accommodate the building program, with some compromises.
 5. Cost Analysis was done on three selected schemes to develop estimated probable total project costs (TPC) including hard construction costs and soft costs. Costs were based on historical square foot costs for similar facilities.
 6. The Final Report draft has been submitted for the committee's review and comment and will be finalized based on the committee's decisions regarding next steps to take.
-

- 3.03 JMS reviewed the existing conditions assessments of the police and fire stations. Spatial deficiencies in the police station include lack of administrative spaces, inadequate evidence processing and storage spaces, inadequate dispatch facilities, lack of acoustical privacy between spaces, lack of a dedicated armory, locker rooms open to the path of egress and no handicapped accessibility, among others. Any addition attached to the existing building will most likely trigger compliance with current lateral load code requirements. Retrofits required might include additional reinforcement to existing reinforced CMU walls and additional structural hardware and plywood nailing in wood framed walls. New roof lines may add additional loads to the existing roof requiring existing trusses to be sistered with 2x framing. If the first floor does not work operationally, an option to consider would be to demolish the building down to the first floor slab and reconstruct the first floor and roof in their entirety.

Spatial deficiencies in the fire station include lack of administrative and support spaces, undersized vehicle bays, lack of proper gear storage rooms, lack of decontamination room, inadequate living spaces, and no handicapped accessibility, among others. Any significant structural alterations, including new openings in existing masonry walls, will trigger compliance with current lateral load code requirements. The existing masonry walls are unreinforced and would require extensive retrofitting in order to meet the current code. The wood roof over the training room would require new structural hardware and a plywood overlay to the existing roof sheathing. These would add significant cost to the project. It is likely not cost effective to save the fire station building.

JMS explained that the buildings may continue to serve their current functions, however neither meets the current or future space needs of either department. If a new building project is not pursued, the Town must address existing deferred maintenance issues and budget for future maintenance issues as the buildings continue to age.

-
- 3.04 JMS presented the cost development of the chosen three schemes. Hard construction costs are based on the current cost of constructing similar facilities and then escalating the cost out in time to the estimated mid-point of construction to account for increasing material and labor costs over time. Soft costs are based on fees other Towns have incurred on similar projects.
-

- 3.05 There was a lengthy discussion regarding the estimated costs and what steps could be taken to drive the total project cost down. Various suggestions were discussed including building a third building on the existing site for fire apparatus, building a second fire station on another site for fire apparatus, exploring if neighboring Towns would provide emergency services to Boxborough and finding a way to keep operations on site during construction to eliminate temporary facilities costs. ALD reminded the committee he was asked to explore if there were any sites in Town that might serve as
-

temporary locations for the police and fire departments during construction. He reported that he found few sites that would be adequate for either temporary facilities or new construction. MN suggested the committee be thoughtful about the options that are explored so that they don't negatively impact operations or emergency services to the Town. MN also noted that delaying the project in any way will only cost the Town more as prices continue to escalate. JMS explained the only real way to substantially cut costs is to cut building square footage. She stated that if the Town decided to move forward with a more in-depth study, the first step would be to look at the programming with the end users and identify what cuts could be made.

-
- 3.06 JG suggested the committee choose two TPC numbers, one high and one low, that they believe will be feasible for the Town to accept. The next phase of the study would be to look at what buildings those chosen TPCs would buy. HKT previously provided an estimated fee for continuing the study. JMS agreed to review that fee and send the committee a description of a proposed scope of work associated with that fee. The committee agreed with this approach. JG will discuss with the Board of Selectmen.

-
- 3.07 The next meeting will be held in April on a Tuesday night to be determined. The committee will have comments on the draft report at that time. The Board of Selectmen and Finance Committee will be invited to ask questions and learn about the study process to date and proposed plan to move forward.
-

Next Meeting to be held: TBD

Please contact HKT Architects if these minutes do not accurately reflect discussions.

Cc: All attendees

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PROGRAMMING QUESTIONNAIRE – POLICE DEPARTMENT

Please provide as much information as possible for each section of the following questionnaire. You may not have an answer for every question but please do your best. The information will be used during the Space Needs Assessment effort for your department. Thank you for participating.

Name: Chief Warren B. Ryder

Department/Division/Group: Boxborough Police Department

Phone number and email address: 978.264.1751 wryder@boxborough-ma.gov

Date of Completion November 14, 2014

General Information

Function: Please describe the primary function of your department in as much detail as is possible.

See attached

Operation: Please provide information on the following: visitors to your offices, hours of operation, security concerns.

Visitors and Interaction with Community: 700-800 walk in visitors per year

Public Business Hours: 24 x 7

Staff Hours: 24x7 Patrol/Dispatch 8hr shifts and admin staff M-F 7:00am - 5:00pm

Security/Safety Concerns: See attached

Issues such as noise, fumes, indoor temperature, natural daylight: See attached

Shared spaces and access by Community: See attached

Emergency Events: Please describe any special requirements or needs during emergency events (*Water, fuel or communication needs, changes to parking or queuing*).

As a 24/7 emergency service provider we need to remain operational in any situation and

therefore have the standard requirements for uninterrupted utilities. Parking is limited and

when additional staff are on duty it gets tight.

Other Information: Please provide additional information that you believe would provide a more complete picture of your needs with a focus on intangible ideas (*such as, we want to provide an open atmosphere but our work is too sensitive because*).

We want to provide an attractive and healthy facility that staff enjoys working out of and the

community feels welcome in. Adequate and safe space is needed to create a productive and

efficient work environment.

Staffing Requirements

Staffing: Please provide an organizational chart for your department. Please include current staffing and possible projected staffing until the year 2035.

[illegible]

Parking: Personal vehicles, Town owned vehicles + equipment

Vehicles: Please provide as detailed of a list as you can. Parking counts are required by zoning and this list will help us confirm needs and special issues. Please provide overall sizes (*Small = 8' x 10', Medium = 8' x 20' – typical car, Large = 12' x 30', X-large = 12' x 40' or larger*). Please note if vehicle must be stored indoors or in an uncovered parking lot and other unique feature (*electric vehicle, van etc*).

[illegible]

Police Department Specific Programming

Police Vehicles: In the vehicle portion of this questionnaire you have listed your vehicles and equipment, both existing and projected. What other issues should we understand about these vehicles: *do you perform light maintenance in-house, how is your sallyport organized?*

Keeping the vehicles sheltered from rain, snow and ice is a priority. We spend a great deal of time and effort shuffling the fleet around for plowing and prepare units for the next shift. Snow and ice is also a problem during emergencies when staff responds outside of a normal shift and needs to respond to an emergency.

Dispatch and Communications: Describe current situation and preferred placement of this function?

Dispatch is an important function of the successful operation of all emergency services and they need to be accessible to the public, staff and if possible the detention area for prisoner monitoring.

Describe archived and secure storage needs: How many years of records do you maintain?

We currently have no storage space in the department. We have utilized every available hallway and corner of the building to meet our records storage demands. We traditionally fill two 40" drawers a year with new records.

Phasing: If phasing of construction is required what are the major issues of concern?

Safety and security, evidence, property and records storage. Dispatch Center operations

Thank you.

Function: Please describe the primary function of your department in as much detail as is possible.

The Boxborough Police Department provides all of the typical police services expected of a municipal law enforcement agency. The Police and Communication Departments currently consist of 11 sworn personnel, 5 non-sworn full-time personnel, 6 non-sworn part-time personnel, and 9 part-time sworn officers. In 2013, the Boxborough Police Department responded to 10,715 calls for service and made 299 adult arrests. To better understand the function of this agency we strategically manage separate functions by “divisions”.

Patrol Division –The Boxborough Police Department generally provides for the peace, safety, and security of persons and properties within the community and those properties owned by the municipality. It is the function of the patrol division to provide twenty-four hour uniformed patrol coverage to all areas of the town including the interstate highway. Officers provide preventative patrols; receive, process, and investigate complaints by citizens; investigate and respond to emergencies such as crimes, accidents, injuries, illness, and fires; protect persons and property through crime prevention; arrest offenders; appear in court; provide traffic control and enforcement; attend community meetings; perform miscellaneous services related to public health and safety; safeguard the custody and disposal of evidence and lost and found property.

Detective Division – A Detectives responsibility is to conduct follow-up investigations of all criminal matters. Detectives assigned to this division develop and maintain sources of intelligence information pertaining to criminal activity. Based on the information they gather, they also initiate investigations. They review all criminal activity reported within the town and correlate information as it may pertain to open investigations with our region. They work closely with neighboring police agencies as well as state and federal law enforcement agencies. When necessary, they apply for and execute search warrants, they maintain fingerprint and photograph files and they prepare cases for prosecution. The detectives are also responsible for storing and securing evidence relating to investigations and found property. Additionally, they perform other administrative tasks such as police applicant background checks, ABC license investigations, and sex offender registry.

Communications Division – Dispatchers perform a full range of radio and telephone operational duties in this 24-hour facility. Dispatchers are required to process and prioritize incoming calls

for police, fire and EMS assistance using a computer-aided dispatch system. Determine the nature and location of the emergency; determine priorities, and dispatch police, fire ambulance or other emergency units as necessary and in accordance with established procedures. Receive and process Next-Generation 911 emergency calls, maintain contact with all units on assignment, maintain status and location of police and fire units. Monitor direct emergency alarms, answer non-emergency calls for assistance. Enter, update and retrieve information from a variety of computer systems. Receive requests for information regarding vehicle registration, driving records and warrants, and provides pertinent data. Monitor several complex public safety radio frequencies. Operate a variety of communications equipment, including radio consoles, telephones and computer systems.

Special Services Division – The Special Services Division encompasses two units: Animal Control and Central Massachusetts Law Enforcement Council (CEMLEC) responders. These designations fall under Special Services because their response area reaches beyond the Town of Boxborough.

The Animal Control Officer (ACO) is responsible for communities of Boxborough and Littleton (possible adding Stow next year). The ACO is under the direction of the Chief of Police and is assigned to work out of the Boxborough Police Department. The position is part-time with an assigned work week of 22 hours. The ACOs responds to citizen complaints or concerns, which are received through Dispatch and directed to the ACO. Patrols the Town's conservation, recreation, and specific school areas where either commercial dog walkers and/or individual dog owners exercise their pets. Patrols are conducted by vehicle and on foot with an emphasis on enforcing the local Dog Regulations for residents, owners, and commercial dog walkers.

The Central Massachusetts Law Enforcement Council (CEMLEC) is a non-profit corporation consisting of over 76 municipal law enforcement agencies and one county Sheriff that assist each other through a mutual aid agreement. CEMLEC covers a vast land area of central Massachusetts and serves a population in excess of 800,000 citizens across four counties. CEMLEC augments local departments by providing specialized services, equipment and personnel. We currently have one Officer assigned to the CEMLEC Crash Reconstruction Unit and one Officer assigned to the Special Response Team (SRT) and is responsible for the SRT command vehicle housed at our Department.

Administrative Division – The Boxborough Police Administrative Division assists in the direction of long term activities for the police department to accomplish its mission and goals. This helps to ensure that department resources are used in the most efficient and effective manner. To do this, the Administrative Division has several functions. The Administration Division is responsible for coordinating police department efforts with other local departments, with other criminal justice agencies, and with the community. The Administration Division also works with regional, state and national organizations to enhance the ability of the police department to ensure the safety of all persons in the community. The Administrative Division is responsible for the logistics of the police department. This means that personnel assigned to the division prepare and administer the police budget and coordinate the computer resources with those of Federal, and State Governments. The Administrative Division also oversees all information and communications systems that are required to keep the police department operating effectively. This includes development, implementation, and management of the department's rules, regulations, and policies, as well as maintaining all department records and documents, and managing all department training. This is all done while managing department goals and objectives to provide the most cost effective delivery of police service.

Issues such as noise, fumes, indoor temperature, natural daylight:

The police station currently has little to no noise suppression between offices, meeting rooms and public areas. A visitor in the public lobby can easily hear the activities emanating from the communications area, meeting room or hallways of the building. The administration has limited privacy during closed door meetings and operational noise flows over into the offices. The interview room is also susceptible to this and it becomes problematic when recording a statement or it causes cross contamination of statements between suspects or a victims. Special consideration should also be given to the interview room HVAC system in regards to the recording sessions that take place.

Temperature control was an issue in this building until we installed separate HVAC systems in the Communications Center, data room and offices. The dispatch center and data room would generally call for cooling most of the time due to the numerous computers and monitors that generate heat. This would cause an imbalance for rest of area affected by this zone. Uniformed members of the department wearing bullet resistant gear would be warmer than those serving an administrative roll. Zoning these areas prevents thermostat disputes, overworking HVAC systems as they are frequently changed and provides comfort to all in the workspace. Our HVAC system is integrated with the rest of building. These systems should be designed to isolate and exhaust the detention area from the rest of the building in the event contamination from chemical weapons, human contaminates and airborne illnesses.

The current station has ample natural lighting that provides a pleasant work environment and reduces energy consumption. Offices are equipped with variable lighting controls and task lighting. The exterior of the building has good building mounted lighting that help make up the shortcomings of the pole mounted lights that have failed over time. I would like these concepts carried through with future designs (well, everything but failing the pole lights).

Security/Safety Concerns:

On the inside, maintaining separateness between the many distinct functions and services is a key to maintaining a secure environment. The public should be securely separated from operations; prisoners should be separated from police staff and crime victims; and the records management, 911 communications and dispatch services, and emergency operations center should be located on separate and secure floors or areas. The existing facility is lacking in all of these areas. The Boxborough's Police and Communications Departments are currently operating in a shared building. The building was constructed in 1989 and was originally designed to house only the Police Department and six full time employees. The building is a two level, wood framed structure consisting of 3,000 square feet, which is too small for its needs.

A modern secure facility should incorporate an access control system that manages and tracks all movement into and within the building. Currently, access can be gained through two exterior doors by way of a push button lock. There is no access control or monitoring.

An important aspect of security is that prisoners never leave a secure environment once they are taken inside a police car. They currently enter the secure sally port garage and are walked into a detention area just off the garage. This design eliminates all commingling of prisoners, police staff, and other building employees. Although limited in space, our design provides for separate detention areas for men, women, and juveniles. This is an element that we would like to see in future designs.

The current interview room also serves as the only office area available for three detectives and patrol officers to share and is not conducive to the interview process. To minimize distractions, there should be limited items in the room; therefore, there is nothing available to be fashioned into an improvised weapon. For safety reasons, officers conducting the interview should always be positioned between the interviewee and the exit door. This is necessary to allow the officer a means of egress if the interviewee becomes violent and also allows backup officers a clear line of sight to the interviewee when entering the room.

The evidence and property room is currently situated in the corner of the building exposed to two outside walls and has no barrier above the ceiling tiles. This severely compromises the integrity

of the room. There is no designated area for weapons storage. We currently store weapons and ammunitions inside office grade, locked cabinets that line the entrance to the locker room.

On the outside, the current building is lacking in measures that could improve building defenses and occupant safety in the event of workplace violence, attacks or during natural or manmade disasters. The building is a wood framed building with standard residential windows. This structure could be easily compromised with minimal effort. The dispatch center is located on ground level and there are no barriers to inhibit vehicles from exiting the roadway onto the lawn and driving through the communications center, Chiefs and supervisors offices. The communications center is separated from the public lobby by standard drywall and wired glass that provide minimal protection to the staff. There should be a safe room that dispatchers could allow a victim to enter off of the lobby while police were called.

Shared spaces and access by Community:

We currently do not offer any space for the community. Police meetings are often held offsite at other limited public spaces in the community. It is desired to include a multi-purpose space in the new facility. It would be beneficial to have a designated area that could serve as the emergency operations center, training room, community meeting room, etc...



PROGRAMMING QUESTIONNAIRE – FIRE DEPARTMENT

Please provide as much information as possible for each section of the following questionnaire. You may not have an answer for every question but please do your best. The information will be used during the Space Needs Assessment effort for your department. Thank you for participating.

Name: **Randolph T. White, Fire Chief**

Department/Division/Group: **Fire Department**

Phone number and email address: **978-264-1775 rwhite@boxboroughfire.com**

Date of Completion **November 14, 2014**

General Information

Function: Please describe the primary function of your department in as much detail as is possible.

Boxborough Fire provides fire and medical emergency services. We currently have 1 Full Time Chief, 1 Part Time Admin Assistant, 4 Full Time Firefighters/EMT's 30 Per-Diem / Call Firefighter/EMT's. We receive approximately 1500 request for services a year, from emergencies, Box plug outs, car seat inspections, fire prevention, etc.... Were staffed 24x7 5 during the day time 0700 - 1700 and 2 at night 1700 - 0700

Operation: Please provide information on the following: visitors to your offices, hours of operation, security concerns.

Visitors and Interaction with Community: **1500 from Permits, Directions, Car seat Inspections, Walk in Medicals, etc...**

Public Business Hours: **24 X 7**

Staff Hours: **24 X 7 Two Shifts 07:00 - 17:00 and 17:00 - 07:00**

Security/Safety Concerns: Building security when station is empty

Issues such as noise, fumes, indoor temperature, natural daylight:

keep vehicle fumes captured, heating garage bays

Shared spaces and access by Community:

2nd floor training room, not ADA accessible

Emergency Events: Please describe any special requirements or needs during emergency events (*Water, fuel or communication needs, changes to parking or queuing*).

During emergency events we need generator, water, dispatch, fuel, septate parking for shift personnel and off duty emergency responders. EOC for prolonged events. extra sleeping accommodations

Other Information: Please provide additional information that you believe would provide a more complete picture of your needs with a focus on intangible ideas (*such as, we want to provide an open atmosphere but our work is too sensitive because*).

Staffing Requirements

Staffing: Please provide an organizational chart for your department. Please include current staffing and possible projected staffing until the year 2035.

[illegible]

Parking: Personal vehicles, Town owned vehicles + equipment

Vehicles: Please provide as detailed of a list as you can. Parking counts are required by zoning and this list will help us confirm needs and special issues. Please provide overall sizes (*Small = 8' x 10', Medium = 8' x 20' – typical car, Large = 12' x 30', X-large = 12' x 40' or larger*). Please note if vehicle must be stored indoors or in an uncovered parking lot and other unique feature (*electric vehicle, van etc*).

[illegible]

Fire Department Specific Programming

Fire Vehicles: In the vehicle portion of this questionnaire you have listed your vehicles and equipment, both existing and projected. What other issues should we understand about these vehicles: *do you perform light maintenance in-house, do you have a preferred layout of first response equipment, do you provide an ambulance service in-house?*

We do our own light maintenance. All first response equipment should be forward facing.
We provide our own ambulance, and should have separate cleaning and restocking area

Dispatch and Communications: Describe current situation and preferred placement of this function?

Dispatch is a crucial operation. must be accessible to public for walk-in emergencies.
Provide 24 x 7 security monitoring and staff accessibility

Describe archived and secure storage needs: How many years of records do you maintain?

We are very limited on record storage. Secured personnel records. Building plans,
permits, etc...

Phasing: If phasing of construction is required what are the major issues of concern?

Dispatch, safe guarding of emergency apparatus freezing, staffing, equipment, etc...

Thank You.



ROOM DATA SHEETS + SKETCHES – SHARED AND TOWN SPACES

ROOM OR SPACE

Room No: SKA-1S
Description: **Entry Vestibule - Lobby**
Name:
Group: Public - Shared

Quantitative Criteria: 1 412
Square feet

Functional Description: 1 Wayfinding, notices and pamphlet information
2 Possibly on two levels
3 Countertop

Qualitative Description: 1 Welcoming, open area, control point
2 Accessible but no direct access to work areas

Locational Criteria: 1 Wayfinding obvious to visitor
2 Adjacent to elevator and stair
3 Adjacent to Fire Admin Assistant, Police Admin Assistant, Dispatch, Multi-purpose Office

Technical Criteria:

Walls: GWB with bullet resistant panels at Dispatch and Admin
Floors: Porcelain Tile
Ceiling: Acoustic Tile & GWB
Windows: Desirable
Plumbing: Drinking fountain
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect; spots in display area
Power: Standard
Tel/Data: NA
Security: Standard Entry Lock
Equipment: Bullet resistant transaction windows with pass thru and speakers

Furnishings: 1 Built in seating
2 Display for pamphlets and brochures
3 Surface for filling out forms with accessible area
4 Bulletin Board
5 Service Window
6 Display cabinet for Fire and Police memorabilia
7 Medication disposal drop-off box

Notes: Upper lobby required if two level building used and public has access to both levels.

ROOM OR SPACE

Room No: SKA-2S
Description: **Multi-Purpose / Safe Room**
Name:
Group: Public - Shared

Quantitative Criteria: 1 144
Square feet

Functional Description: 1 Use for interviewing witnesses
2 Use for public fingerprint requests
3 Use for firearms licensing
4 Use for safe room for public entering station for protection
5 Use for blood pressure screenings/other minor first aid walk-ins
6 Waiting room for both departments
7 Small meeting room

Qualitative Description: 1 Private enclosed conference area
2 Sterile environment with all equipment secured behind locked doors

Locational Criteria: 1 Adjacent to Lobby

Technical Criteria:

Walls: GWB, Office Standard
Floors: Resilient
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock with electric strike
Equipment: Computer

Furnishings: 1 Conference table
2 Seating for 4 people
3 Whiteboard / Tackboard
4 Lockable wall and base cabinets

Notes: Space secured from lobby. Must be buzzed in.

ROOM OR SPACE

Room No: SKA-3S
Description: **Public Toilet 1 set of 2**
Name:
Group: Public - Shared

Quantitative Criteria: 1 128
Square feet (per set)

Functional Description: 1 Men's and Women's Toilet
2 Fully accessible

Qualitative Description: 1 Toilet area

Locational Criteria: 1 Adjacent to Lobby

Technical Criteria:

Walls: GWB/Ceramic Tile
Floors: Ceramic Tile
Ceiling: GWB or acoustic tile
Windows: None
Plumbing: Standard Toilet Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct/Indirect
Power: Standard Toilet Environment
Tel/Data: None
Security: Standard Toilet Room Lock
Equipment: None

Furnishings: 1 Mirror
2 Soap dispenser
3 Towel dispenser/trash receptacle
4 Feminine dispenser and receptacle
5 Toilet paper dispenser
6 Coat hook
7 Shelving
8 Baby changing station

Notes:

ROOM OR SPACE

Room No: SKA-4S
Description: **Training Room / EOC**
Name:
Group: Public - Shared

Quantitative Criteria: 1 912
Square feet
2 Capable of subdivision

Functional Description: 1 Used for training or classroom teaching - 50 at tables and chairs, 75 at chairs alone
2 Used for large staff meetings; available for community functions/meetings
3 EOC location

Qualitative Description: 1 Comfortable environment for lecturing or training
2 Multi-media
3 Good acoustics
4 Multiple lighting levels

Locational Criteria: 1 Access to both Police and Fire Departments
2 Access to main lobby desirable
3 Storage for chairs and tables adjacent
4 Storage for AV equipment nearby

Technical Criteria:

Walls: GWB
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Meeting Room Environment
Ventilation: Standard Meeting Room Environment
Lighting: Direct/Indirect; variable lighting levels; dimming
Power: Standard Meeting Room / EOC
Tel/Data: Standard Meeting Room / EOC
Security: Standard Office Lock
Equipment: Overhead projector, overhead screen, wall mounted TV

Furnishings: 1 Folding training tables
2 Stackable seating for 75 people
3 Lecturn
4 Whiteboard / Tackboard
5 Blackout shades

Notes: Can be used by community or as EOC
Can ideally be secured from the public during emergency event

ROOM OR SPACE

Room No: SKA-5S
Description: **Training Storage**
Name:
Group: Public - Shared

Quantitative Criteria: 1 80
Square feet
2

Functional Description: 1 Storage for chairs and tables

Qualitative Description: 1 Closet for storage

Locational Criteria: 1 Adjacent to Training / EOC

Technical Criteria:

Walls: GWB
Floors: Resilient or carpet
Ceiling: Acoustic Tile
Windows: NA
Plumbing: NA
HVAC: Standard Storage Environment
Ventilation: Standard Storage Environment
Lighting: Direct / Indirect
Power: Standard
Tel/Data: NA
Security: Standard Storage Lock
Equipment: NA

Furnishings: 1 None

Notes:

ROOM OR SPACE

Room No: SKA-6S
Description: **Conference Room**
Name:
Group: Administration - Shared

Quantitative Criteria: 1 192
Square feet
2 8 Person Capacity

Functional Description: 1 Meeting area
2 Use for in house meetings
3 Use for Presentations to Town officials

Qualitative Description: 1 Private enclosed conference area

Locational Criteria: 1 Centrally located for Fire and Police administrative use

Technical Criteria:

Walls: GWB, Office Standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect; Dimming possible
Power: Standard Conference
Tel/Data: Standard Conference including conference call capability
Security: Standard Office Lock
Equipment: Overhead projector, projection screen, Phone, Speaker

Furnishings: 1 Conference table
2 Seating for 8 people
3 Bookcases or credenza
4 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-7S
Description: **Fitness Room**
Name:
Group: Staff Support - Shared

Quantitative Criteria: 1 750
Square feet

Functional Description: 1 Exercise room

Qualitative Description: 1 Good ventilation
2 Easy to maintain/clean
3 Comfortable relaxed environment

Locational Criteria: 1 Centrally located
2 Easy access for both police and fire departments

Technical Criteria:

Walls: GWB and 8' high mirrors on one wall
Floors: Rubber athletic flooring
Ceiling: Acoustic Tile
Windows: Preferred
Plumbing: NA
HVAC: Standard
Ventilation: Standard
Lighting: Direct/Indirect
Power: Standard
Tel/Data: Standard
Security: Standard office lock
Equipment: CATV

Furnishings: 1 Treadmill
2 Stairmaster
3 Exercise Bicycle
4 Free Weights
5 Universal

Notes: Not contractually required for either department
Include floor space for stretching

ROOM OR SPACE

Room No: SKA-8S
Description: **Janitor's Closet**
Name:
Group: Shared

Quantitative Criteria: 1 20
Square feet
2 1 required per floor (see notes)

Functional Description: 1 House janitorial supplies

Qualitative Description: 1 Durable materials

Locational Criteria: 1 One required per level

Technical Criteria:

Walls: Moisture Resistant GWB
Floors: Ceramic Tile, resinous, linoleum
Ceiling: GWB
Windows: None
Plumbing: Standard Janitors Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct
Power: Standard Toilet Environment
Tel/Data: None
Security: Standard Lock
Equipment: None

Furnishings: 1 Janitors sink or mop sink
2 Rack for mops, brooms etc.
3 Shelving

Notes: Per Code, one Janitor's closet required per floor. If the building is a 2-story shared facility, assume 1 shared Janitor's closet for shared spaces, 1 Janitor in FD to be used by FD staff for cleaning living quarters and 1 Janitor in PD for use by PD/DPW Facility Maintenance.

ROOM OR SPACE

Room No: SKA-9S
Description: **Mechanical Room**
Name:
Group: Support - Shared

Quantitative Criteria: 1 400
Square feet

Functional Description: 1 Room for mechanical equipment

Qualitative Description: 1 Service type room

Locational Criteria: 1 Central in building

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Not required
Plumbing: NA
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct
Power: As required for equipment
Tel/Data: Required
Security: Standard storage lock
Equipment: Mechanical Equipment

Furnishings: 1 None

Notes: Double door

ROOM OR SPACE

Room No: SKA-10S
Description: **Main Electrical Room**
Name:
Group: Support - Shared

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Room for electrical service and panels

Qualitative Description: 1 Service type room

Locational Criteria: 1 Central in building
2 Close to emergency generator

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Concrete with hardener or sealer
Ceiling: GWB
Windows: Not required
Plumbing: NA
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct Utility
Power: Determined by equipment needs
Tel/Data: Required
Security: Standard storage lock
Equipment: Electrical equipment

Furnishings: 1 None

Notes:

ROOM OR SPACE

Room No: SKA-11S
Description: **Plumbing / Fire Protection Room**
Name:
Group: Support - Shared

Quantitative Criteria: 1 168
Square feet

Functional Description: 1 Room for plumbing and fire protection services and panels

Qualitative Description: 1 Service type room

Locational Criteria: 1 Central in building

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Not required
Plumbing: NA
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct
Power: Standard environment
Tel/Data: Required
Security: Standard storage lock
Equipment: Fire protection service (dry and wet) check valve assembly, domestic water meter and reduced backflow preventer, water heater and expansion tank protection, tempered water control panel and mixing valves

Furnishings: 1 None

Notes:

ROOM OR SPACE

Room No: SKA-12S
Description: **Emergency Electrical Room**
Name:
Group: Support - Shared

Quantitative Criteria: 1 100
Square feet

Functional Description: 1 Emergency electric panels

Qualitative Description: 1 Service type room

Locational Criteria: 1 Central in building
2 Close to emergency generator

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Concrete with hardener or sealer
Ceiling: GWB
Windows: Not required
Plumbing: NA
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct Utility
Power: Determined by equipment needs
Tel/Data: Required
Security: Standard storage lock
Equipment: Electrical equipment

Furnishings: 1 None

Notes:

ROOM OR SPACE

Room No: -
Description: **Stairs**
Name:
Group: Support - Shared

Quantitative Criteria: 1 800
Square feet
2 Assumes two stairs connecting two floors

Functional Description: 1 Vertical circulation

Qualitative Description: 1 Well lit

Locational Criteria: 1 Ideally centrally located to be shared by departments

Technical Criteria:

Walls: GWB
Floors: Raised rubber tile
Ceiling: GWB
Windows: Not required
Plumbing: NA
HVAC: Standard
Ventilation: Standard
Lighting: Direct
Power: Standard
Tel/Data: NA
Security: Dependant on final plan layout
Equipment:

Furnishings: 1

Notes:

ROOM OR SPACE

Room No: -
Description: **Elevator and Machine Room**
Name:
Group: Support - Shared

Quantitative Criteria: 1 275
Square feet

Functional Description: 1 Vertical circulation

Qualitative Description: 1

Locational Criteria: 1 Accessible to the lobby

Technical Criteria:

Walls: Standard
Floors: Porcelain Tile in elevator; resilient in machine room
Ceiling: Standard
Windows: NA
Plumbing: NA
HVAC: NA
Ventilation: NA
Lighting: Standard
Power: Standard
Tel/Data: Standard
Security: Dependant on final plan layout
Equipment: Hydraulic elevator

Furnishings: 1

Notes:

ROOM OR SPACE

Room No: SKA-1T
Description: **Human Services Office**
Name:
Group: Town Space

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Deskwork
2 Available to public

Qualitative Description: 1 Private Office

Locational Criteria: 1 Adjacent to Lobby
2 Adjacent to Training / EOC

Technical Criteria:

Walls: GWB, Office Standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer

Furnishings: 1 Desk with return
2 Seating - 1 office with 2 guest chairs
3 Adjustable shelving on standards
4 File cabinets
5 Tackboard / Whiteboard

Notes:

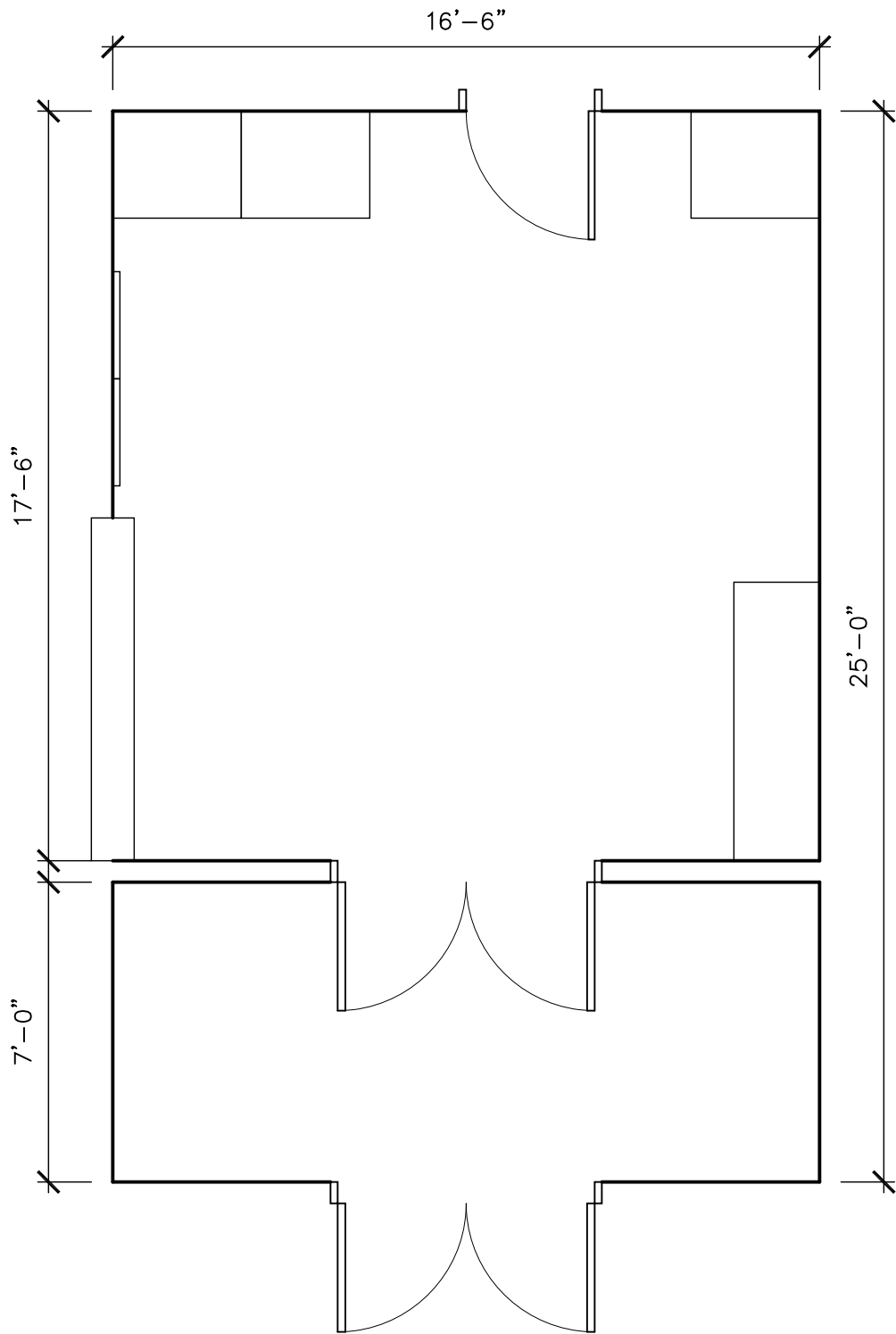


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Project
**BOXBOROUGH PUBLIC SAFETY
FACILITY**
BOXBOROUGH, MA

Date: JAN 15, 2014
Scale: AS NOTED
Job num: 21411
Drawn by: AJD

SKA-1S



PLAN

ENTRY VESTIBULE - LOBBY 412 SF

1/4" = 1'-0"

1

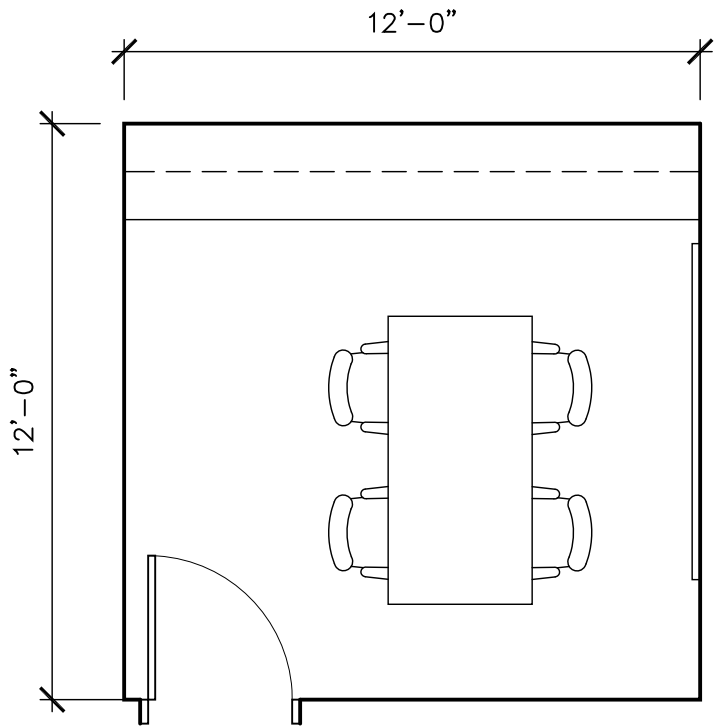


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Date: JAN 15, 2014
Scale: AS NOTED
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Drawn by: AJD

SKA-2S



MULTIPURPOSE / SAFE ROOM - 02S
144 SF

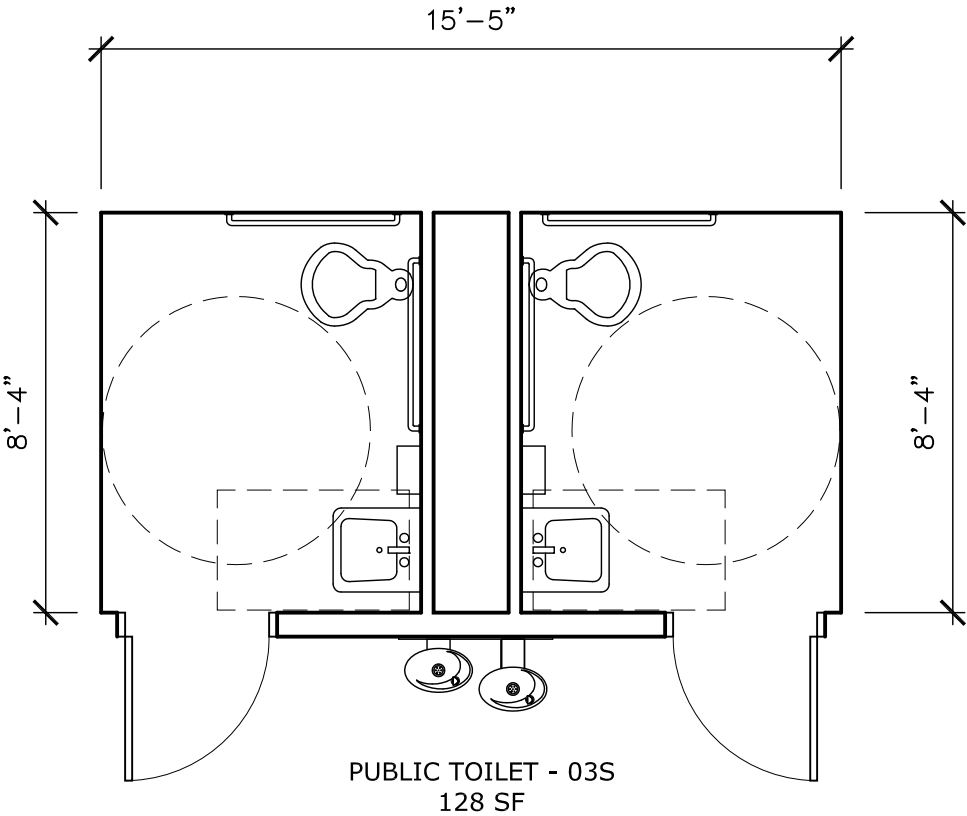


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SKA-3S



PLAN PUBLIC TOILET
1/4" = 1'-0"

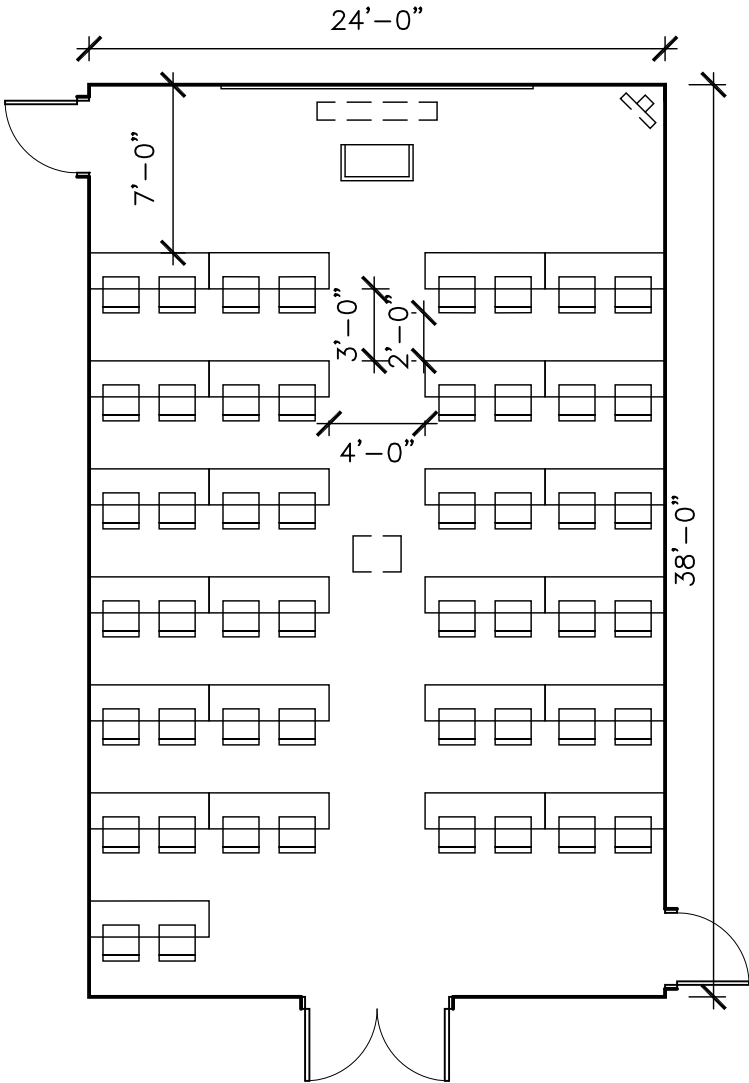


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Drawn by: AJD

SKA-4S-A



TRAINING ROOM / EOC - 04S
SEATING FOR 50 AT TRAINING
TABLES
912 SF



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Project

**BOXBOROUGH PUBLIC SAFETY
FACILITY
BOXBOROUGH, MA**

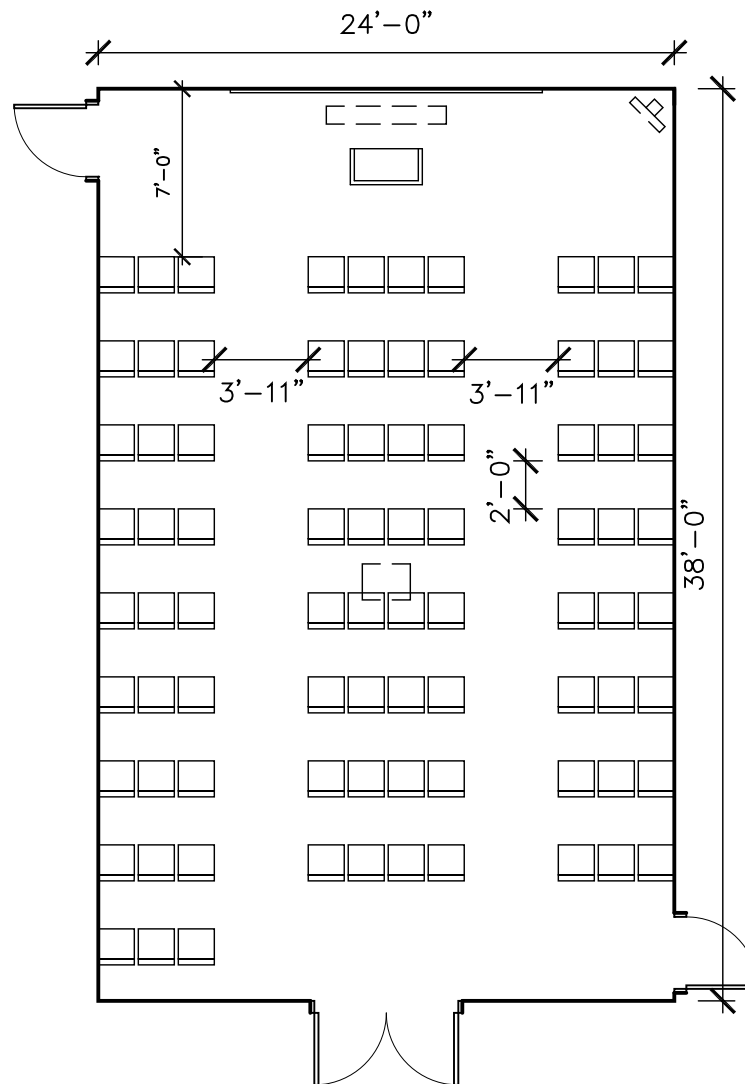
Date: JAN 15, 2014

Scale: AS NOTED

Job num: 21411

Drawn by: AJD

SKA-4S-B



TRAINING ROOM / EOC - 04S
SEATING FOR 83 AT CHAIRS
912 SF

PLAN TRAINING / EOC - SEATING AT CHAIRS

1/8" = 1'-0"

1

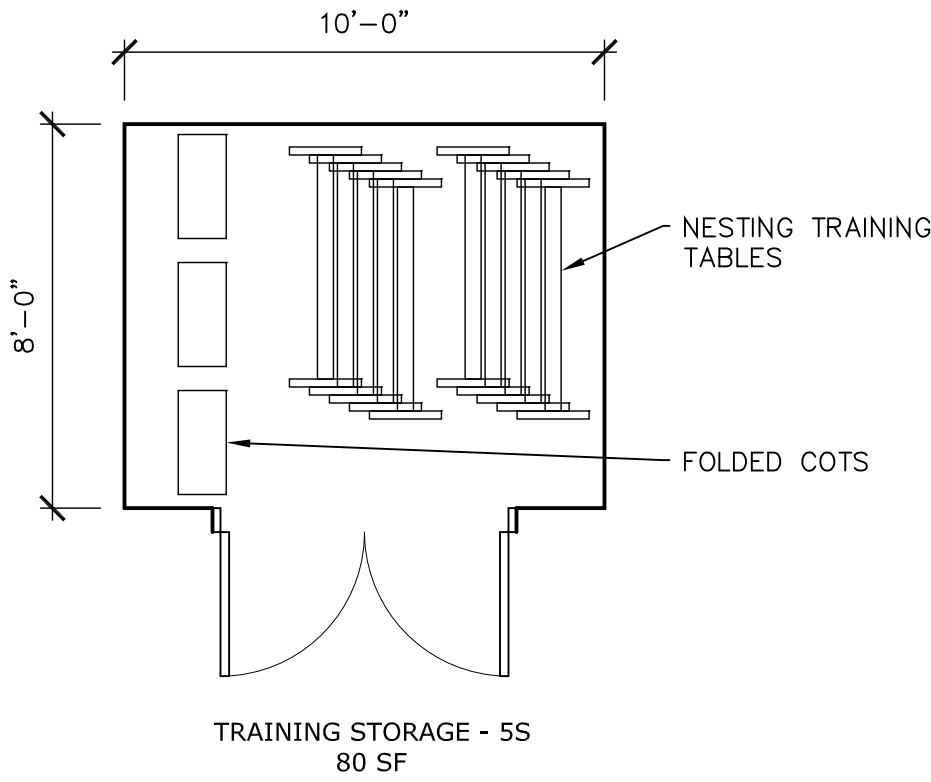


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SKA-5S



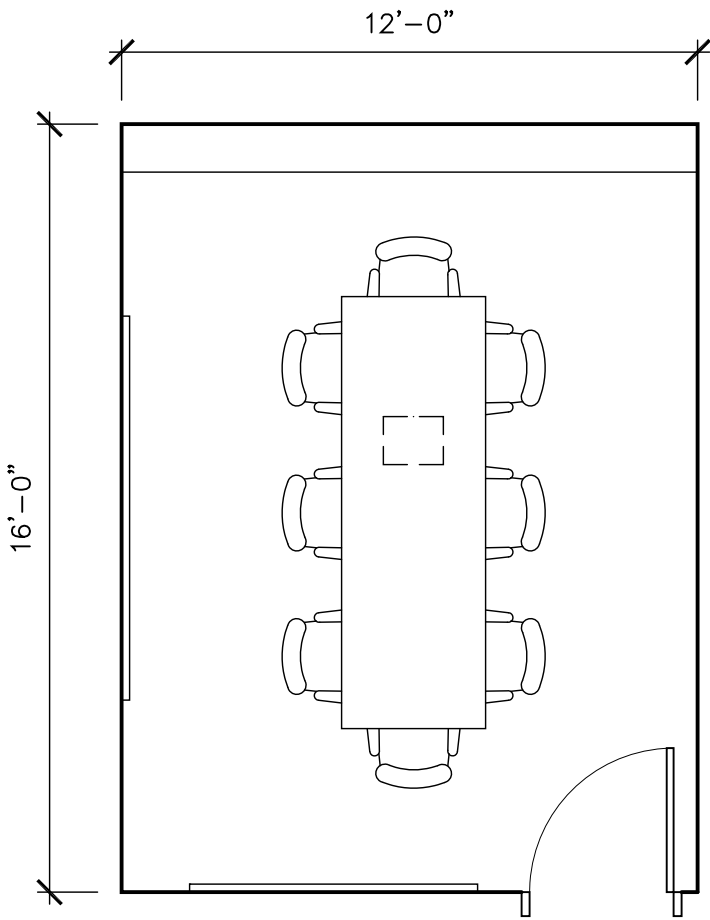


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SKA-6S



CONFERENCE ROOM - 06S
192 SF

PLAN CONFERENCE ROOM
1/4" = 1'-0"

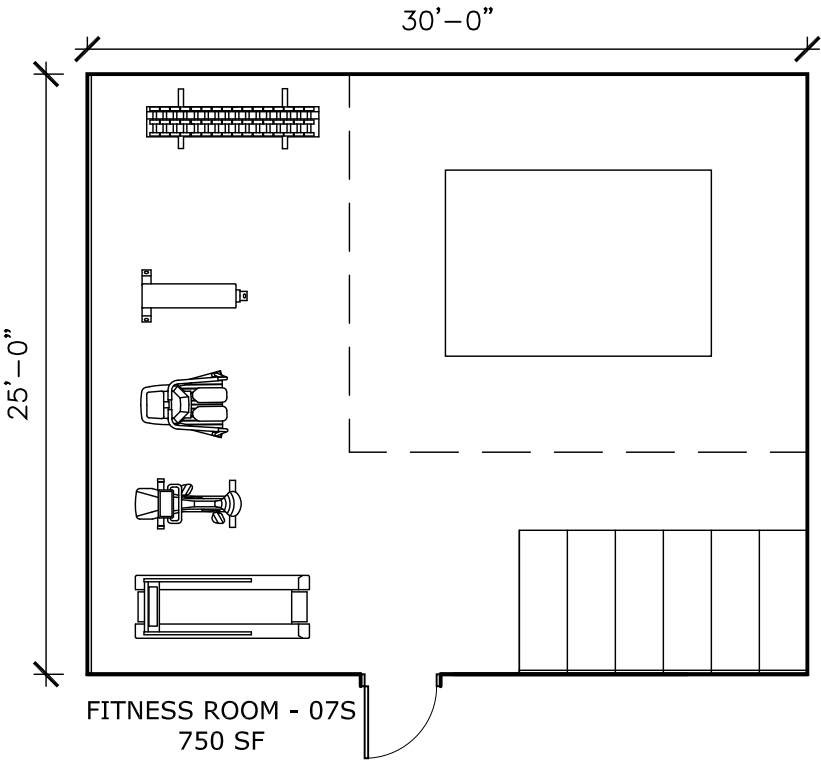


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SKA-7S



PLAN FITNESS ROOM
1/8" = 1'-0"

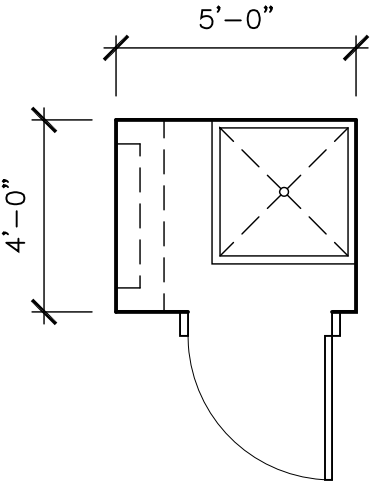


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SKA-8S



JANITOR'S
CLOSET
- 08S
20SF

PLAN JANITOR'S CLOSET
1/4" = 1'-0"

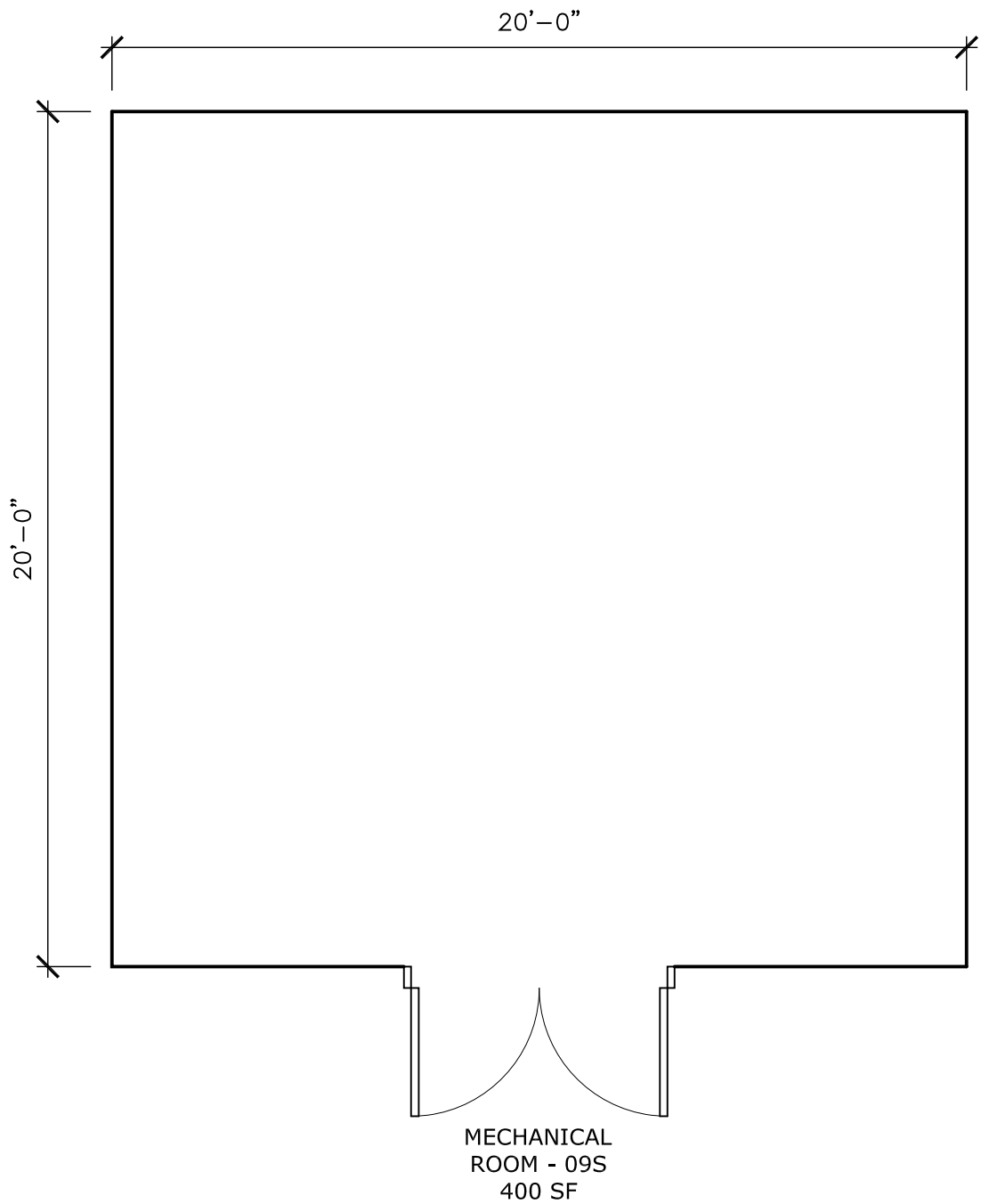


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SKA-9S



PLAN MECHANICAL ROOM

1/4" = 1'-0"

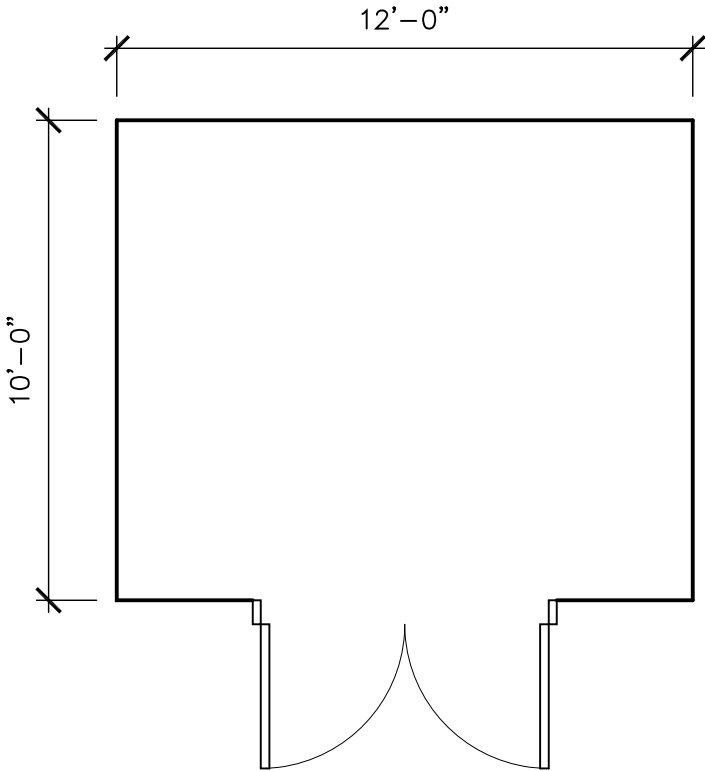


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SKA-10S



MAIN
ELECTRIC ROOM - 10S
120 SF

PLAN MAIN ELECTRIC ROOM
1/4" = 1'-0"



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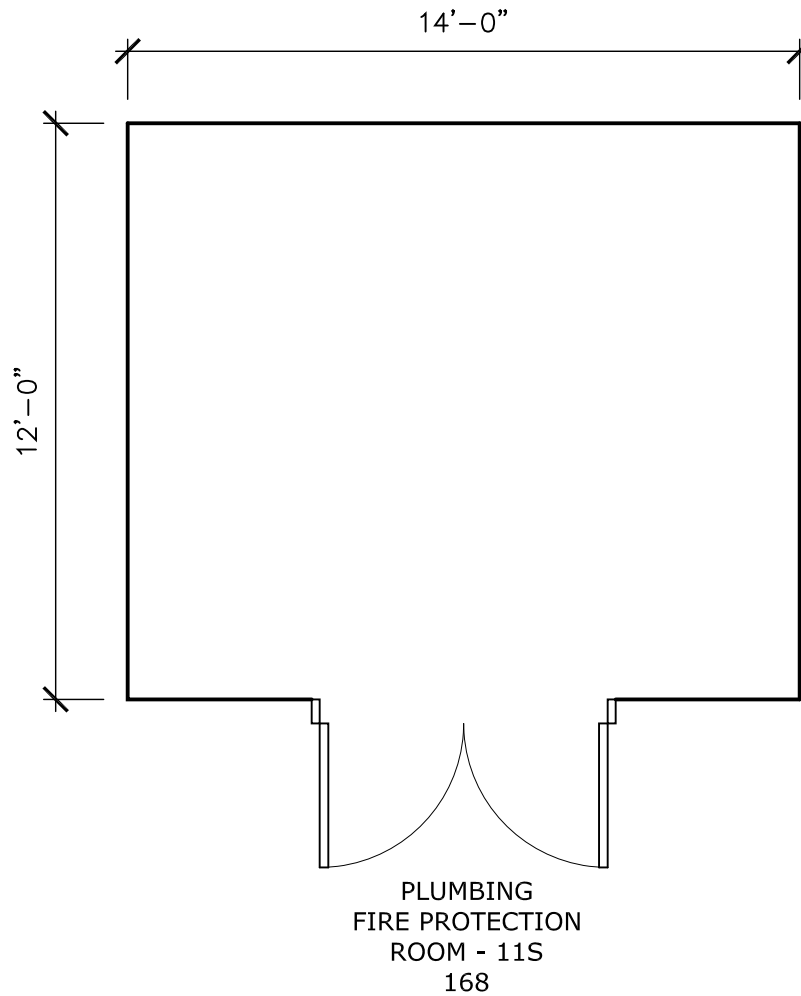
Date: JAN 15, 2014

Scale: AS NOTED

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SKA-11S



PLAN PLUMBING / FIRE PROTECTION ROOM
1/4" = 1'-0"

1

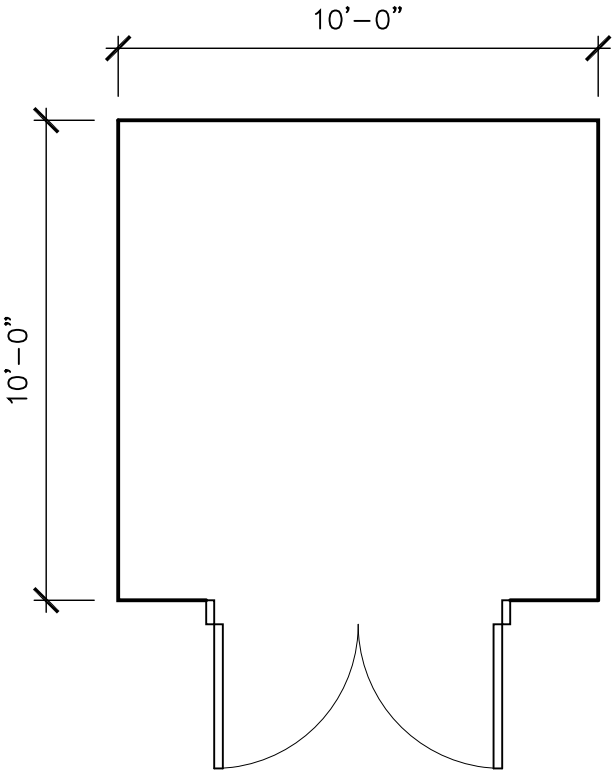


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SKA-12S



EMERGENCY
ELECTRIC
ROOM - 12S
100 SF

PLAN EMERGENCY ELECTRIC ROOM
 $1/4" = 1'-0"$

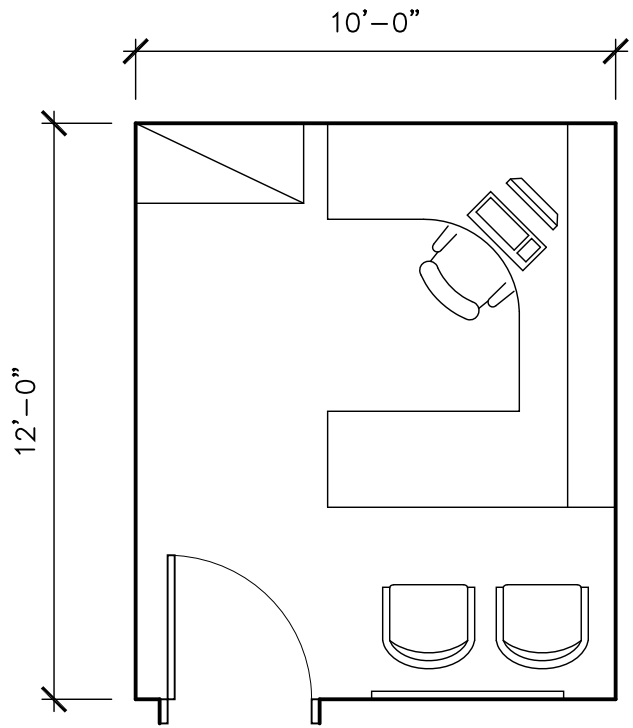


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SKA-1T



HUMAN SERVICES - 01T
120 SF



ROOM DATA SHEETS + SKETCHES – POLICE DEPARTMENT

ROOM OR SPACE

Room No: SKA-1P
Description: **Dispatch**
Name:
Group: Public Area - Police

Quantitative Criteria: 1 396
Square feet

Functional Description: 1 Receive and dispatch calls
2 Receive and dispatch E911 calls
3 Main "greeter" for the station

Qualitative Description: 1 Secure area

Locational Criteria: 1 Adjacent to lobby
2 Close proximity to detention area
3 Close proximity to staff toilet or dedicated unisex staff toilet
4 Adjacent to Dispatch Supervisor
5 Adjacent to Server / E911 Room

Technical Criteria:

Walls: GWB; Insulate for noise control; bullet resistant panels at lobby walls
Floors: Resilient; possibly raised access floor for wiring to run below
Ceiling: Acoustic Tile
Windows: Not required; any windows to be bullet resistant
Plumbing: Kitchen sink
HVAC: Standard Office Environment or Independent System?
Ventilation: Standard Office Environment
Lighting: Direct/Indirect with dimmers
Power: As required for equipment
Tel/Data: Standard Office Environment; as required for equipment
Security: Standard Office Lock
Equipment: Radios; computer; data/phone; fax; printer; shredder; kitchenette with microwave, coffee maker, toaster/oven, cooktop, sink, undercounter refrigerator; CATV; CCTV

Furnishings: 1 Files
2 Shelving for equipment (radios, spare batteries, etc.)
3 Worksurfaces
3 Whiteboard
4 Tackboard for maps
5 Chairs (2) - reclining and comfortable

Notes: If there is an interface wall with lobby it should have bullet resistant window with transaction counter with speaker and pass-thru.
Size for one full-time dispatcher and one future dispatcher

ROOM OR SPACE

Room No: SKA-2P
Description: **Dispatch Supervisor**
Name:
Group: Public Area - Police

Quantitative Criteria: 1 100
Square feet

Functional Description: 1 Receive and dispatch calls (back-up)
2 Receive and dispatch E911 calls (back-up)
3 Deskwork

Qualitative Description: 1 Private office

Locational Criteria: 1 Adjacent to Dispatch

Technical Criteria:

Walls: GWB; Insulate for noise control; bullet resistant panels at lobby walls
Floors: Resilient; possibly raised access floor for wiring to run below
Ceiling: Acoustic Tile
Windows: Not required; any windows to be bullet resistant
Plumbing: NA
HVAC: Standard Office Environment or Independent System?
Ventilation: Standard Office Environment
Lighting: Direct/Indirect with dimmers
Power: As required for equipment
Tel/Data: Standard Office Environment; as required for equipment
Security: Standard Office Lock
Equipment: Radios; computer; data/phone; CATV; CCTV

Furnishings: 1 Desk with return
2 Seating - 1 office with 1 guest
3 Adjustable shelving on standards
3 File cabinet
4 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-3P
Description: **Police Chief Office**
Name: Chief Ryder
Group: Administration - Police

Quantitative Criteria: 1 220
Square feet
2 Meets with 1-2 people

Functional Description: 1 Deskwork
2 Small Meetings

Qualitative Description: 1 Private Office

Locational Criteria: 1 Central access to administrative offices
2 Near Conference Room
3 Near Administrative Assistant

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, scanner, printer, CATV, CCTV, wall mounted computer monitor
(for meetings)

Furnishings: 1 Desks with return
2 Seating - 1 office with 4 guest chairs
4 Bookshelves
5 File cabinets
6 36" round meeting table

Notes: Small closet within room
Acoustically private

ROOM OR SPACE

Room No: SKA-4P
Description: **Administrative Assistant**
Name:
Group: Administration - Police

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Deskwork
2 Available to public
3 Gateway to the Chief

Qualitative Description: 1 Private office

Locational Criteria: 1 Adjacent to Lobby
2 Adjacent to Police Chief
3 Adjacent to Lieutenant
4 Possibly pass through Admin Assistant to access Police Chief's office

Technical Criteria:

Walls: GWB, Office Standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, photocopier, CATV, CCTV

Furnishings: 1 Desk with return
2 Seating - 1 office
3 Adjustable shelving on standards
4 File cabinets
5 Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-5P
Description: **Lieutenant**
Name: future
Group: Administration - Police

Quantitative Criteria: 1 144
Square feet
2 Meets with 1-2 people

Functional Description: 1 Deskwork
2 Small Meetings

Qualitative Description: 1 Private Office

Locational Criteria: 1 Central access to administrative offices
2 Near Conference Room
3 Near Administrative Assistant
4 Near Chief's Office

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV, CCTV

Furnishings: 1 Desks with return
2 Seating - 1 office with 2 guest chairs
3 Bookshelves
4 File cabinets
5 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-6P
Description: **Detectives**
Name:
Group: Administration - Police

Quantitative Criteria: 1 276
Square feet

Functional Description: 1 Deskwork
2 Active case file storage

Qualitative Description: 1 Shared Office for 4

Locational Criteria: 1 Central access to administrative offices
2 Adjacent to Detective Sergeant
3 Accessible to interview

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV

Furnishings: 1 4 Desks with returns
2 Seating - 4 office with 1 guest chairs
3 (4) lateral files 42" with 4 drawers
4 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-7P
Description: **Detective Sergeant**
Name:
Group: Administration - Police

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Deskwork
2 Active case file storage

Qualitative Description: 1 Private office

Locational Criteria: 1 Central access to administrative offices
2 Adjacent to Detectives
3 Accessible to interview

Technical Criteria:

Walls: GWB, Office Standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV, CCTV

Furnishings: 1 Desk with return
2 Seating - 1 office with 1 guest chair
3 Adjustable shelving on standards
4 Lateral file cabinet
5 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-8P
Description: **Interview Room**
Name:
Group: Administration - Police

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Use for interviewing witnesses or detainees
2 Use for "soft" juvenile holding
3 Small meeting room

Qualitative Description: 1 Private enclosed conference area

Locational Criteria: 1 Adjacent to AV Surveillance

Technical Criteria:

Walls: GWB; one way glass mirror to AV Surveillance
Floors: Carpet
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: One way glass mirror to AV Surveillance; CCTV

Furnishings: 1 Conference table
2 Seating for 4 people

Notes:

ROOM OR SPACE

Room No: SKA-9P
Description: **AV Surveillance**
Name:
Group: Administration - Police

Quantitative Criteria: 1 100
Square feet

Functional Description: 1 Audio and video surveillance of interview room
2 Direct surveillance of interview room through one-way glass

Qualitative Description: 1 Secure workroom for video equipment

Locational Criteria: 1 Adjacent to Interview Room

Technical Criteria:

Walls: GWB; one way glass mirror to Interview
Floors: Resilient
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: Standard Office Environment; AC needs dependent upon equipment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: One way glass mirror to Interview Room; head end for all surveillance
(building, cells, interview room, etc)

Furnishings: 1 Worksurface
2 Seating for (1)

Notes:

ROOM OR SPACE

Room No: SKA-10P
Description: **Archival Document Storage**
Name:
Group: Administration - Police

Quantitative Criteria: 1 200
Square feet

Functional Description: 1 Secure storage for records

Qualitative Description: 1 Dry, well lit and secure

Locational Criteria: 1 Near administrative staff

Technical Criteria:

Walls: GWB, Office Standard
Floors: Resilient
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Storage Lock
Equipment: None

Furnishings: 1 High density file storage
2 Countertop or table
3 Seating - 1 office chair

Notes: Typically archive 7LF of files per year. Some records must be kept 10-25 years or for life.

ROOM OR SPACE

Room No: SKA-11P
Description: **Office Supplies**
Name:
Group: Administration - Police

Quantitative Criteria: 1 48
Square feet

Functional Description: 1 Storage for office supplies

Qualitative Description: 1 Good lighting

Locational Criteria: 1 Near Administrative Assistant

Technical Criteria:

Walls: GWB
Floors: Resilient or carpet
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: Standard Storage Environment
Ventilation: Standard Storage Environment
Lighting: Direct / Indirect
Power: Standard Storage Environment
Tel/Data: NA
Security: Standard Storage Lock
Equipment:

Furnishings: 1 Shelving on standards
2 Storage for paper and toner

Notes:

ROOM OR SPACE

Room No: SKA-12P
Description: **IT Support / Animal Control**
Name:
Group: Administration - Police

Quantitative Criteria: 1 144
Square feet

Functional Description: 1 Deskwork
2 Computer system repair / maintenance

Qualitative Description: 1 Secure, dry, well lit

Locational Criteria: 1 Central location or as required
2 Adjacent to Server / E911 Room

Technical Criteria:

Walls: GWB
Floors: Resilient
Ceiling: ACT
Windows: Required
Plumbing: NA
HVAC: Standard office environment
Ventilation: Standard office environment
Lighting: Direct / indirect
Power: Standard office environment
Tel/Data: Required
Security: Standard office lock
Equipment: Computer

Furnishings: 1 Desk with return
2 Desk or worksurface
3 Seating - 3 office chairs
4 Whiteboard / Tackboard
5 Workbench
6 Adjustable shelving on standards
7 File cabinet

Notes: Includes a small closet for Animal Control Officers gear.

ROOM OR SPACE

Room No: SKA-13P
Description: **Server / E911 Room**
Name:
Group: Administration - Police

Quantitative Criteria: 1 192
Square feet

Functional Description: 1 Room for all Police and Fire servers
2 Card access and cell check head end location
3 E911 head end location

Qualitative Description: 1 Secure, dry, well lit

Locational Criteria: 1 Central location or as required
2 Adjacent to IT Support
3 Close proximity to Dispatch preferred

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Resilient
Ceiling: Exposed to structure
Windows: Not required
Plumbing: Foam fire suppression system?
HVAC: Standard environment; independent AC
Ventilation: Standard environment
Lighting: Direct
Power: Standard environment; as required for equipment; emergency power
Tel/Data: Required
Security: Standard office lock with limited access
Equipment: CCTV, Telephone, security, E911, card access
(x) full size server racks
(x) full size switches
E911 UPS power
Police & Fire Dept UPS power
Telephone head end

Furnishings: Racks

Notes: Contractor will provide conduit and pull strings for Town's vendor to install all wiring.
Provide backboards for all wall mounted equipment.

ROOM OR SPACE

Room No: SKA-14P
Description: **Staff Toilet 1 set of 2**
Name:
Group: Administration - Police

Quantitative Criteria: 1 128
Square feet (per set)

Functional Description: 1 Men's and Women's Toilet
2 Fully accessible

Qualitative Description: 1 Toilet area

Locational Criteria: 1 General office area

Technical Criteria:

Walls: GWB/Ceramic Tile
Floors: Ceramic Tile
Ceiling: GWB or acoustic tile
Windows: None
Plumbing: Standard Toilet Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct/Indirect
Power: Standard Toilet Environment
Tel/Data: None
Security: Standard Toilet Room Lock
Equipment: None

Furnishings: 1 Mirror
2 Soap dispenser
3 Towel dispenser/trash receptacle
4 Feminine dispenser and receptacle
5 Toilet paper dispenser
6 Coat hook
7 Shelving

Notes:

ROOM OR SPACE

Room No: SKA-15P
Description: **Toilet / Shower / Locker Room Male**
Name:
Group: Staff Support - Police

Quantitative Criteria: 1 1052
Square feet

Functional Description: 1 Toilet / Shower / Lavatory / Locker
2 Drying area for wet garments

Qualitative Description: 1 Multiple occupant space
2 Secure
3 Good ventilation
4 Durable Materials

Locational Criteria: 1 Adjacent to Squad Room

Technical Criteria:

Walls: GWB with epoxy paint; Ceramic Tile wainscot
Floors: Ceramic Tile or Resinous flooring
Ceiling: Acoustic Tile and GWB
Windows: None
Plumbing: Standard Toilet Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct/Indirect
Power: Standard Toilet Environment
Tel/Data: One outlet
Security: Standard Toilet Room Lock
Equipment: Speakers for radio monitoring

Furnishings: 1 Mirrors
2 Soap dispensers
3 Towel dispenser/trash receptacle
4 Toilet paper dispensers
5 Showers with bench seats
6 Clothing hooks
7 20 Lockers - 24"D x 36"W with slope tops, double doors, outlets, boot storage, drawer below and integral bench

Notes: Provide wet garment drying area.

ROOM OR SPACE

Room No: SKA-16P
Description: **Toilet / Shower / Locker Room Female**
Name:
Group: Staff Support - Police

Quantitative Criteria: 1 295
Square feet

Functional Description: 1 Toilet / Shower / Lavatory / Locker
2 Drying area for wet garments

Qualitative Description: 1 Multiple occupant space
2 Secure
3 Good ventilation
4 Durable Materials

Locational Criteria: 1 Adjacent to Squad Room

Technical Criteria:

Walls: GWB with epoxy paint; Ceramic Tile wainscot
Floors: Ceramic Tile or Resinous flooring
Ceiling: Acoustic Tile and GWB
Windows: None
Plumbing: Standard Toilet Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct/Indirect
Power: Standard Toilet Environment
Tel/Data: One outlet
Security: Standard Toilet Room Lock
Equipment: Speakers for radio monitoring

Furnishings: 1 Mirrors
2 Soap dispensers
3 Towel dispenser/trash receptacle
4 Toilet paper dispensers
5 Showers with bench seats
6 Clothing hooks
7 Feminine napkin disposal
8 5 Lockers currently - 24"D x 36"W with slope tops, double doors, outlets,
boot storage, drawer below and integral bench

Notes:

ROOM OR SPACE

Room No: SKA-17P
Description: **Janitor**
Name:
Group: Staff Support - Police

Quantitative Criteria: 1 80
Square feet
2 1 required per floor (see notes)

Functional Description: 1 House janitorial supplies
2 Workspace for facilities maintenance staff

Qualitative Description: 1 Durable materials

Locational Criteria: 1 One required per level

Technical Criteria:

Walls: Moisture Resistant GWB
Floors: Ceramic Tile, resinous, linoleum
Ceiling: GWB
Windows: None
Plumbing: Standard Janitors Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct
Power: Standard Toilet Environment
Tel/Data: None
Security: Standard Lock
Equipment: None

Furnishings: 1 Janitors sink or mop sink
2 Rack for mops, brooms etc.
3 Shelving
4 Workbench
5 Task chair

Notes: Per Code, one Janitor's closet required per floor. If the building is a 2-story shared facility, assume 1 shared Janitor's closet for shared spaces, 1 Janitor in FD to be used by FD staff for cleaning living quarters and 1 Janitor in PD for use by PD/DPW Facility Maintenance.

ROOM OR SPACE

Room No: SKA-18P
Description: **Sergeants**
Name:
Group: Operations - Police

Quantitative Criteria: 1 260
Square feet

Functional Description: 1 Deskwork

Qualitative Description: 1 Shared Office for 3 (includes one future)

Locational Criteria: 1 Adjacent to Roll Call
2 Adjacent to Police Patrol Storage

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV

Furnishings: 1 3 Cubicles with worksurfaces, overhead bins and privacy partitions
2 Seating - 3 office and 3 guest
3 File cabinets
4 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-19P
Description: **Police Patrol Storage**
Name:
Group: Operations - Police

Quantitative Criteria: 1 100
Square feet

Functional Description: 1 Storage for patrol officer's supplies (medical supplies, gloves, citations, crime scene tape, etc.)

Qualitative Description: 1 Storage

Locational Criteria: 1 Adjacent to Sergeants

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Radio Chargers

Furnishings: 1 Adjustable shelving for supplies and chargers
2 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-20P
Description: **Roll Call / Lunch**
Name:
Group: Operations - Police

Quantitative Criteria: 1 245
Square feet

Functional Description: 1 Meet for roll call each shift (3-4 officers and dispatchers)
2 Informal staff dining

Qualitative Description: 1 Enclosed meeting space

Locational Criteria: 1 Adjacent to locker area
2 Close proximity to exit to parking
3 Adjacent to Sergeants
4 Adjacent to Report Writing

Technical Criteria:

Walls: GWB
Floors: Resilient
Ceiling: Acoustic Tile
Windows: Required
Plumbing: Kitchen sink
HVAC: Standard
Ventilation: Standard
Lighting: Direct / Indirect
Power: Standard and as required for equipment
Tel/Data: Standard and as required for equipment
Security: NA
Equipment: CATV, Video, refrigerator, microwave, toaster oven, coffee machine, cooktop, wall and base cabinets

Furnishings: 1 (8) chairs without arms
2 3'x8' table
3 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-21P
Description: **Report Writing**
Name:
Group: Operations - Police

Quantitative Criteria: 1 355
Square feet
2 Provide cubicle space for 4 people and shared work/meeting area

Functional Description: 1 Deskwork

Qualitative Description: 1 Shared space for writing reports
2 File storage for patrol staff

Locational Criteria: 1 Near Roll Call
2 Close proximity to Dispatch

Technical Criteria:

Walls: GWB
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Preferred
Plumbing: Standard Office Environment
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: NA
Equipment: CATV, computers

Furnishings: 1 4 Cubicles with worksurfaces, overhead bins and privacy partitions
2 (8) chairs
3 Whiteboard / Tackboard
4 File cabinets

Notes:

ROOM OR SPACE

Room No: SKA-22P
Description: **Evidence**
Name:
Group: Operations - Police

Quantitative Criteria: 1 324
Square feet

Functional Description: 1 Deskwork - processing evidence
2 Secure transfer of evidence
3 Storage of evidence

Qualitative Description: 1 Secure storage / workroom

Locational Criteria: 1 Easily accessible to Patrol Officers, Detectives and Sergeants

Technical Criteria:

Walls: CMU
Floors: Resilient
Ceiling: GWB
Windows: None
Plumbing: Sink
HVAC: Standard Office Environment; pressurize room - see notes below
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Restricted access storage lock
Equipment: CATV, computer, pass-thru evidence lockers including refrigerated locker, refrigerator

Furnishings: 1 Desk or built-in worksurface
2 Chair
3 Shelving
4 Safe
5 Rifle locker
5 Whiteboard / Tackboard

Notes: Seals on doors and proper ventilation required due to possible evidence fumes (marijuana, etc).

ROOM OR SPACE

Room No: SKA-23P
Description: **Bulk Evidence**
Name:
Group: Operations - Police

Quantitative Criteria: 1 160
Square feet

Functional Description: 1 Secure storage of large evidence or found property

Qualitative Description: 1 Secure storage

Locational Criteria: 1 Accessible off Sally Port

Technical Criteria:

Walls: CMU
Floors: Epoxy resinous or concrete with hardener / sealer
Ceiling: Exposed to structure
Windows: None
Plumbing: NA
HVAC: Standard Storage Environment
Ventilation: Standard Storage Environment
Lighting: Direct
Power: Standard Storage Environment
Tel/Data: Standard Storage Environment
Security: Restricted access storage lock
Equipment:

Furnishings:

Notes:

ROOM OR SPACE

Room No: SKA-24P
Description: **Armory**
Name:
Group: Operations - Police

Quantitative Criteria: 1 100
Square feet

Functional Description: 1 Secure storage of guns and ammunition
2 Secure area for cleaning / maintaining weapons

Qualitative Description: 1 Secure storage / workroom

Locational Criteria: 1

Technical Criteria:

Walls: GWB to underside of deck
Floors: Resilient
Ceiling: GWB
Windows: None
Plumbing: NA
HVAC: Standard Environment; pressurize room and provide adequate ventilation for cleaning solvents
Ventilation: Standard Environment
Lighting: Direct/Indirect
Power: Standard Environment
Tel/Data: Standard Environment
Security: Standard storage lock
Equipment:

Furnishings: 1 Built-in worksurface
2 Chair
3 Adjustable shelving
4 Full size gun safe
5 Whiteboard / Tackboard

Notes: Storage for 6 long guns, 10 handguns, ammunition purchased in bulk.
Consider explosion vents.

ROOM OR SPACE

Room No: SKA-25P
Description: **Sally Port / Impound Bay**
Name:
Group: Detention - Police

Quantitative Criteria: 1 1080
Square feet
2 (2) bays; 18' x 30'

Functional Description: 1 Secure internal location for transferring detainees to lock-up
2 Secure vehicle impound area

Qualitative Description: 1 Durable materials easy to clean and maintain
2 Good air quality

Locational Criteria: 1 Direct access to Booking
2 Direct access to Bulk Evidence
3 Good access to exterior

Technical Criteria:

Walls: CMU
Floors: Epoxy Resin or Concrete with non slip surface
Ceiling: Exposed to structure
Windows: None
Plumbing: Floor drains; eyewash
HVAC: No air conditioning; Standard environment
Ventilation: Standard garage and emergency CO monitor and vent system
Lighting: Direct
Power: Standard environment
Tel/Data: Required: 2 locations
Security: Locked; overhead doors to have multiple systems for closing down doors

Equipment: Air and water lines; overhead door controls; wire mesh partition with lockable gate separating bays

Furnishings: 1 Pistol locker for (4)
2 Hanging rack for brooms, shovels

Notes: Size one bay to fit FD Ambulance for transfer sick/injured detainees

ROOM OR SPACE

Room No: SKA-26P
Description: **Tire and Parts Storage**
Name:
Group: Detention - Police

Quantitative Criteria: 1 60
Square feet

Functional Description: 1 Storage of tools and parts
2 Storage of tires
3 Storage of washer fluid

Qualitative Description: 1 Secure storage

Locational Criteria: 1 Adjacent to the Sally Port or Maintenance area in Fire Department Apparatus Bays

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: None
Plumbing: NA
HVAC: Standard storage environment
Ventilation: Standard storage environment
Lighting: Direct
Power: Standard storage environment
Tel/Data: None
Security: Standard storage lock
Equipment:

Furnishings: 1 Tire storage rack for 12 tires
2 Adjustable shelving on standards

Notes:

ROOM OR SPACE

Room No: SKA-27P
Description: **Booking**
Name:
Group: Detention - Police

Quantitative Criteria: 1 300
Square feet

Functional Description: 1 Processing of detainees
2 Fingerprinting
3 Photographing mug shots
4 Breathalyzer testing

Qualitative Description: 1 Good Lighting
2 Durable, easy to clean materials
3 Secure

Locational Criteria: 1 Adjacent to Sally Port
2 Adjacent to detention cells
3 Adjacent to Holding

Technical Criteria:

Walls: CMU
Floors: Epoxy Resinous
Ceiling: GWB
Windows: None
Plumbing: Handwash sink
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct/Indirect
Power: Standard environment
Tel/Data: Standard environment
Security: Standard detention locks
Equipment: Computer, CCTV, breathalyzer, digital fingerprint desktop device, camera, base cabinets with locks and heavy duty hardware including integral pulls, storage lockers for detainees, pass-thru window to Holding

Furnishings: 1 Steel bench with handcuff rail
2 Handcuff rails

Notes:

ROOM OR SPACE

Room No: SKA-28P
Description: **Booking Holding**
Name:
Group: Detention - Police

Quantitative Criteria: 1 72
Square feet

Functional Description: 1 Secure holding of detainees during processing
2 Secure holding of detainees prior to processing

Qualitative Description: 1 Good Lighting
2 Durable, easy to clean materials
3 Secure

Locational Criteria: 1 Adjacent to Sally Port
2 Adjacent to Booking

Technical Criteria:

Walls: CMU
Floors: Epoxy Resinous
Ceiling: GWB
Windows: None
Plumbing: NA
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct/Indirect
Power: Standard environment
Tel/Data: NA
Security: Standard detention locks
Equipment:

Furnishings: 1 Steel bench with handcuff rail

Notes:

ROOM OR SPACE

Room No: SKA-29P
Description: **Detainee Shower / Decon**
Name:
Group: Detention - Police

Quantitative Criteria: 1 50
Square feet

Functional Description: 1 Shower facility for detainees

Qualitative Description: 1 Durable, easy to clean materials
2 Secure
3 Suicide resistant
4 Sight / sound separation between males, females

Locational Criteria: 1 Adjacent to Booking

Technical Criteria:

Walls: CMU
Floors: Epoxy Resinous; pitch to floor drain
Ceiling: GWB
Windows: None
Plumbing: Standard penal shower fixture
HVAC: Standard detention environment
Ventilation: Standard detention environment
Lighting: Direct
Power: None
Tel/Data: None
Security: Standard detention locks
Equipment:

Furnishings:

Notes:

ROOM OR SPACE

Room No: SKA-30P
Description: **Detention Janitor**
Name:
Group: Detention - Police

Quantitative Criteria: 1 30
Square feet

Functional Description: 1 Cleaning supplies for detention area
2 Storage for detention area (bedding, jumpsuits, cuffs, leg irons, toilet paper, cleaning supplies, etc.)

Qualitative Description: 1 Durable, easy to clean materials
2 Secure

Locational Criteria: 1 Accessed outside of detention area
2 Close proximity to detention area

Technical Criteria:

Walls: CMU
Floors: Epoxy Resinous
Ceiling: GWB
Windows: None
Plumbing: Mop sink
HVAC: Standard detention environment
Ventilation: Standard detention environment
Lighting: Direct
Power: Standard detention environment
Tel/Data: None
Security: Standard detention locks
Equipment:

Furnishings: 1 Mop hooks with shelf
2 Wall hooks for cuffs and leg irons
3 Adjustable shelving on standards

Notes:

ROOM OR SPACE

Room No: SKA-31P
Description: **Detention Cell - Male**
Name:
Group: Detention - Police

Quantitative Criteria: 1 140
Square feet
2 (2) cells at 70 square feet each

Functional Description: 1 Single occupancy lock-up for male detainee

Qualitative Description: 1 Durable, easy to clean materials
2 Secure
3 Suicide resistant
4 Sight / sound separation between males, females

Locational Criteria: 1 Adjacent to Booking

Technical Criteria:

Walls: CMU
Floors: Epoxy Resinous; pitch to floor drain outside cell
Ceiling: Steel plate
Windows: None
Plumbing: Standard penal fixture (one HC accessible); floor drain outside cell
HVAC: Standard detention environment; suicide resistant grilles/registers
Ventilation: Standard detention environment; suicide resistant grilles/registers
Lighting: Direct; suicide resistant
Power: None
Tel/Data: None
Security: Standard cell doors/locks
Equipment: Video / audio monitoring; cell check outside

Furnishings: 1 Steel bench with skirt to floor

Notes:

ROOM OR SPACE

Room No: SKA-32P
Description: **Detention Cell - Female**
Name:
Group: Detention - Police

Quantitative Criteria: 1 70
Square feet

Functional Description: 1 Single occupancy lock-up for female detainee

Qualitative Description: 1 Durable, easy to clean materials
2 Secure
3 Suicide resistant
4 Sight / sound separation between males, females

Locational Criteria: 1 Adjacent to Booking

Technical Criteria:

Walls: CMU
Floors: Epoxy Resinous; pitch to floor drain outside cell
Ceiling: Steel plate
Windows: None
Plumbing: Standard penal fixture (one HC accessible); floor drain outside cell
HVAC: Standard detention environment; suicide resistant grilles/registers
Ventilation: Standard detention environment; suicide resistant grilles/registers
Lighting: Direct; suicide resistant
Power: None
Tel/Data: None
Security: Standard cell doors/locks
Equipment: Video / audio monitoring; cell check outside

Furnishings: 1 Steel bench with skirt to floor

Notes:

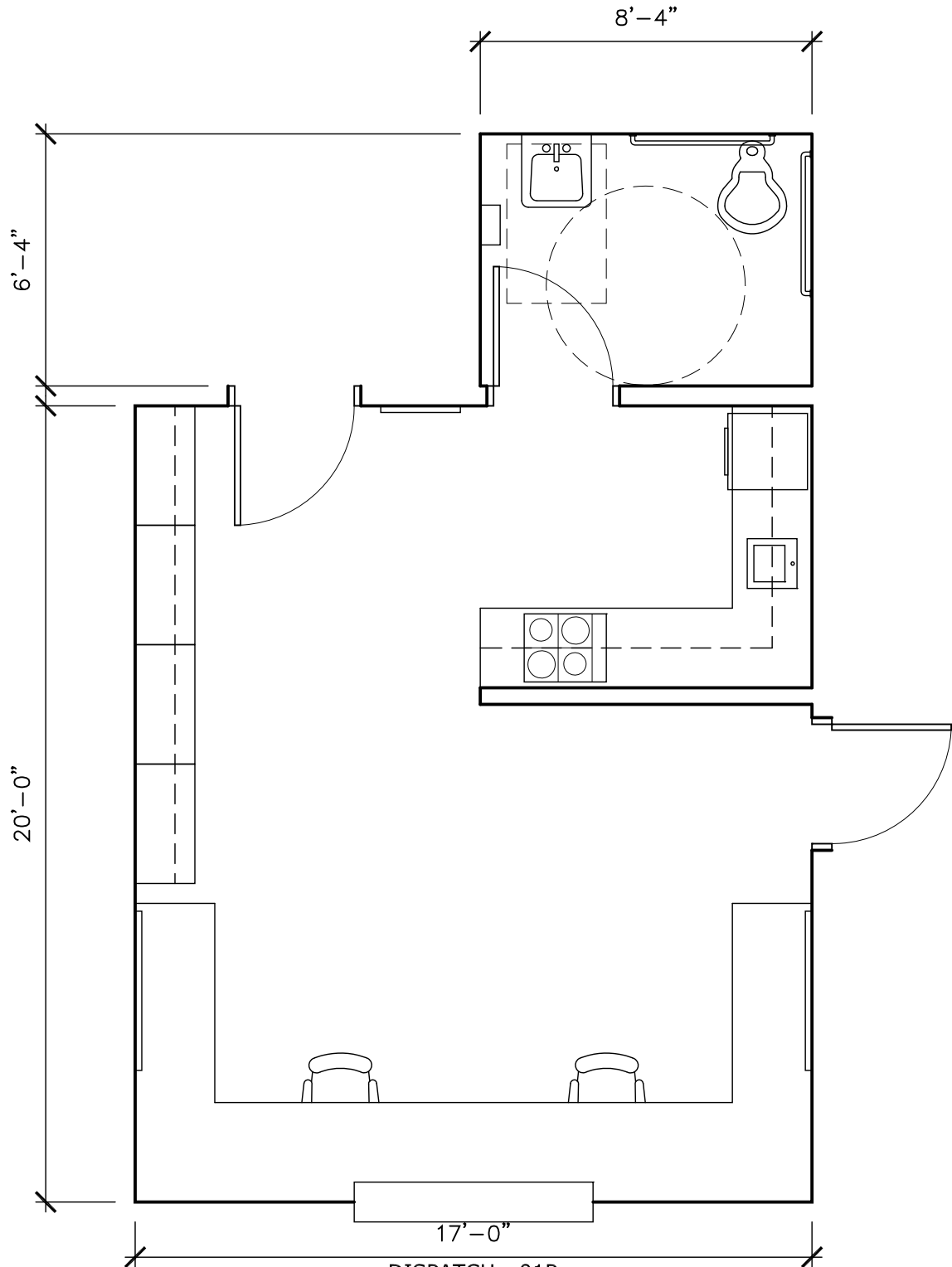


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SKA-1P



PLAN DISPATCH

1/4" = 1'-0"

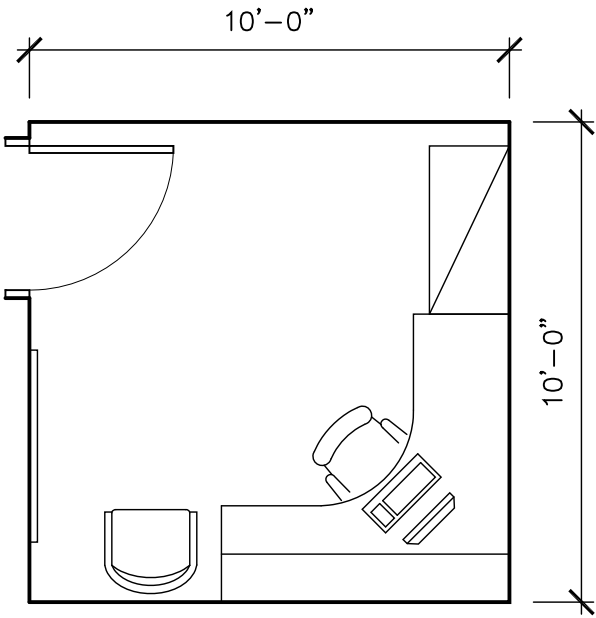


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SKA-2P



DISPATCH SUPERVISOR - 02P
100 SF

PLAN DISPATCH SUPERVISOR

1/4" = 1'-0"

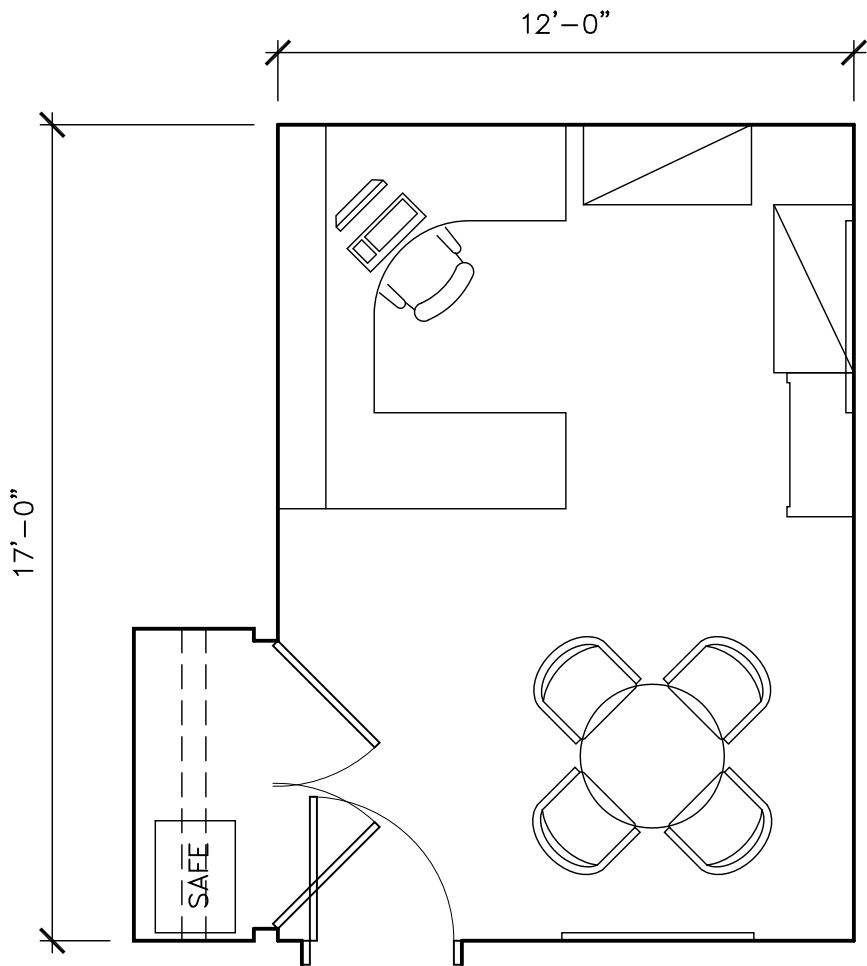


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SKA-3P



POLICE CHIEF OFFICE
- 03P
220 SF

PLAN POLICE CHIEF OFFICE
1/4" = 1'-0"

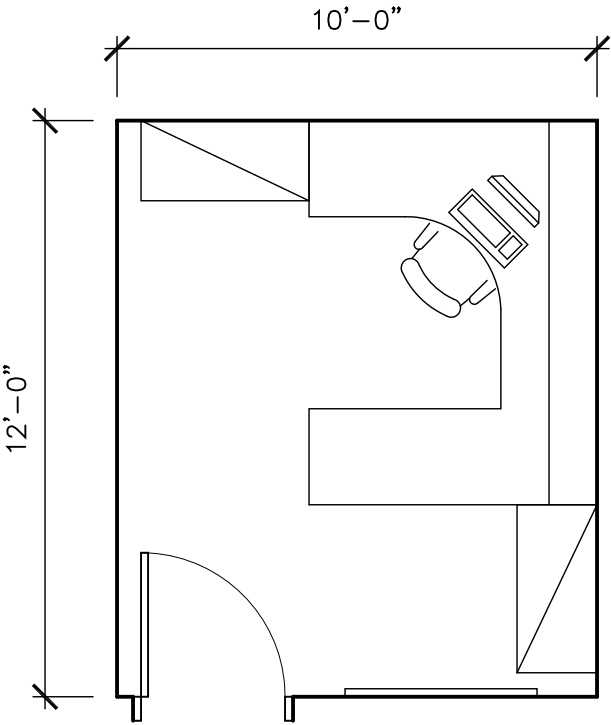


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SKA-4P



ADMINISTRATIVE ASSISTANT - 04P
120 SF

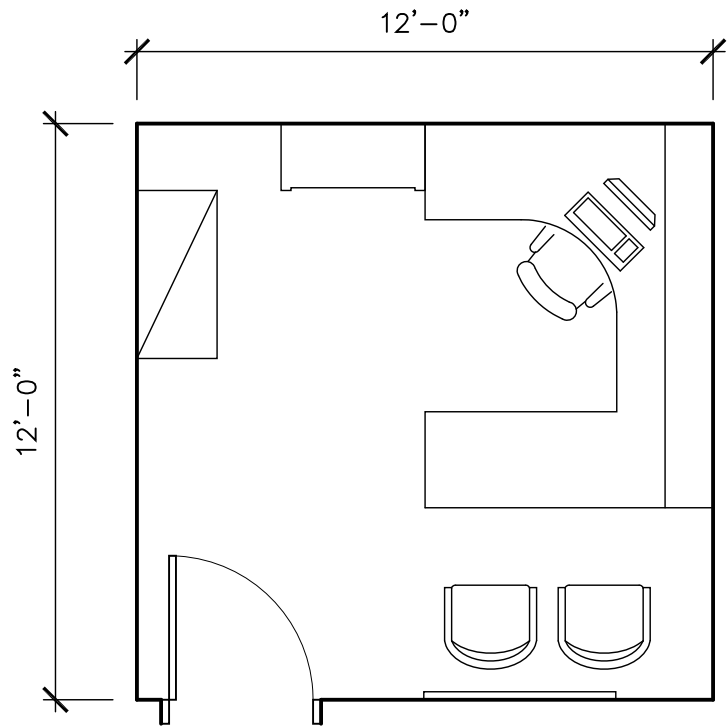


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SKA-5P



LIEUTENANT
- 05P
144 SF

PLAN LIEUTENANT
1/4" = 1'-0"

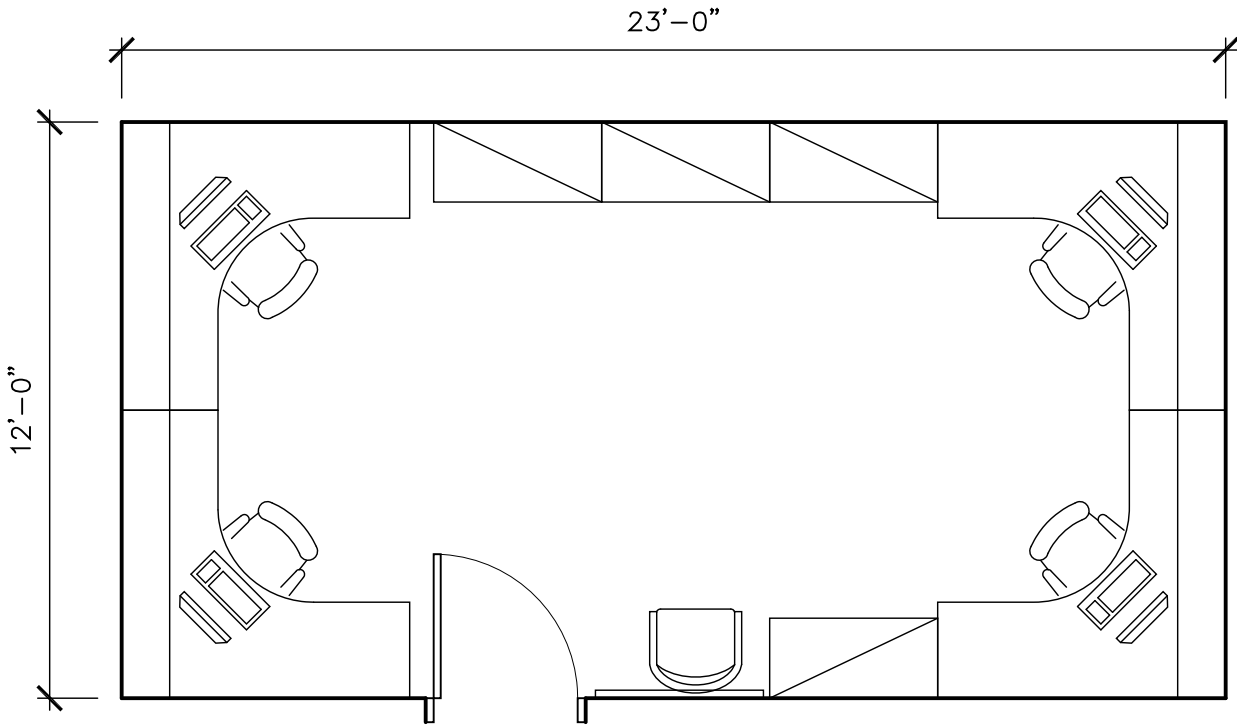


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SKA-6P



DETECTIVES - 06P
276 SF

PLAN DETECTIVES
1/4" = 1'-0"

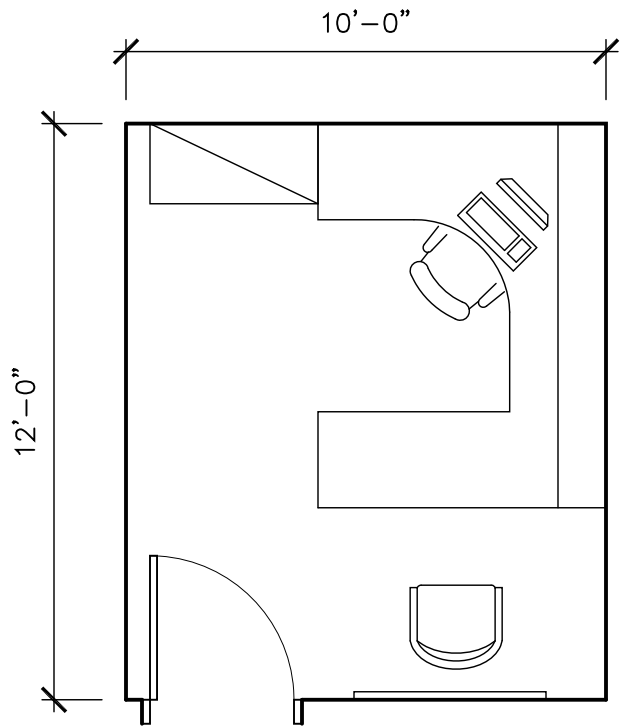


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SKA-7P



DETECTIVE SERGEANT - 07P
120 SF

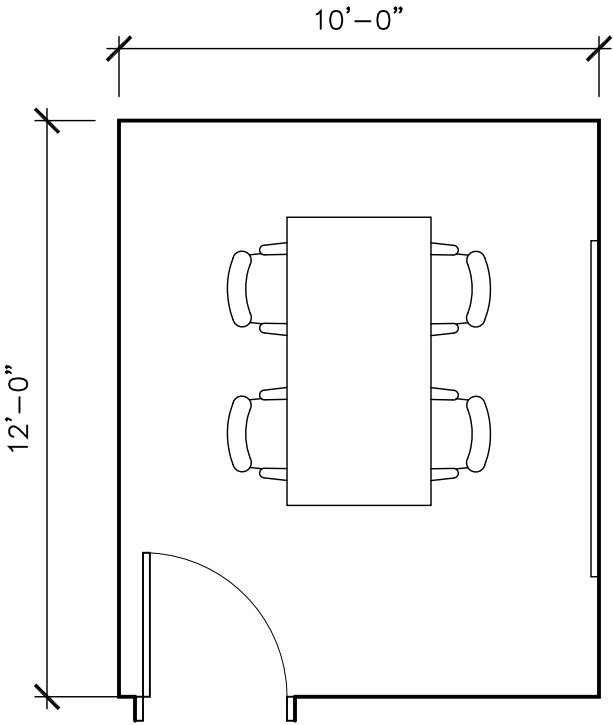


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SKA-8P



INTERVIEW ROOM
- 08P
120 SF



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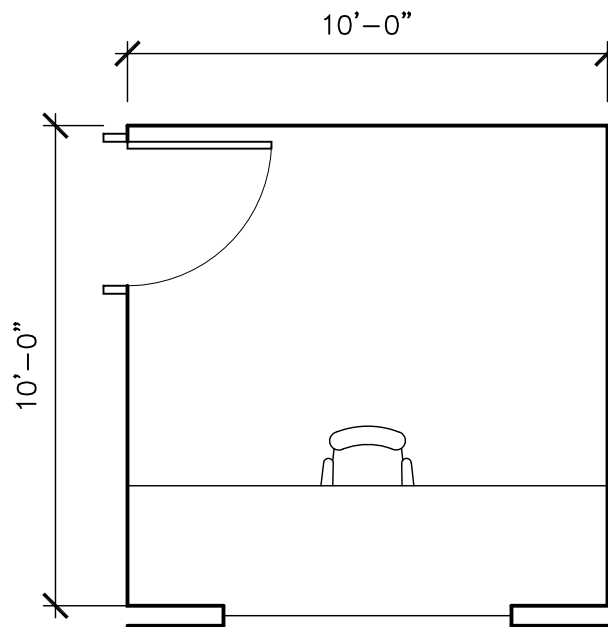
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SKA-9P



AV SURVEILLANCE - 09P
100 SF

PLAN AV SURVEILLANCE
 $1/4" = 1'-0"$

1

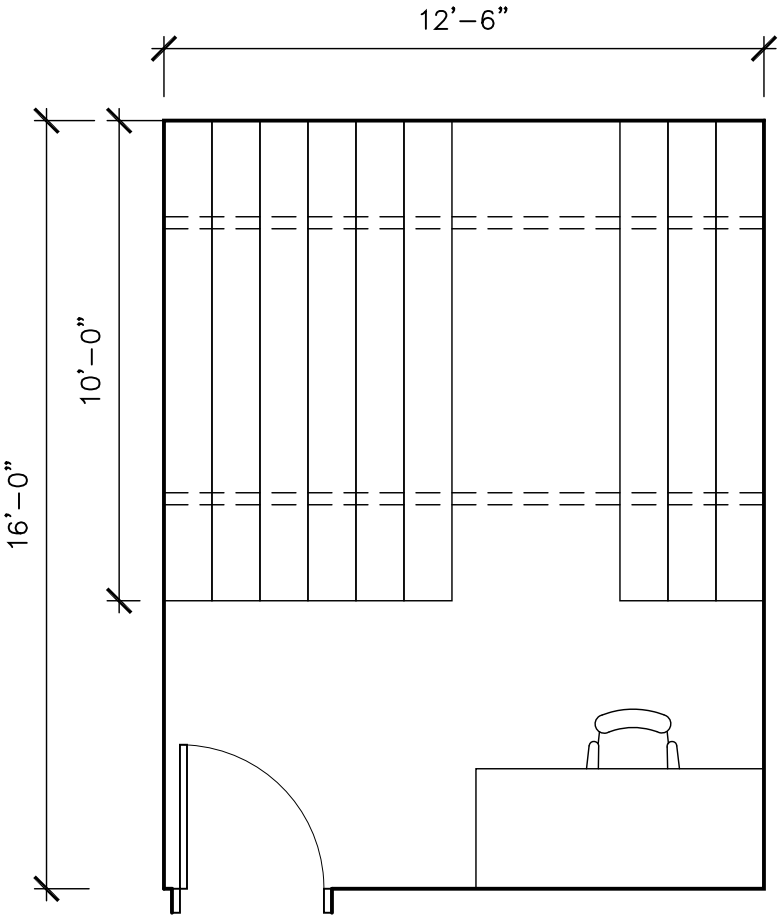


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SKA-10P



ARCHIVAL DOCUMENT STORAGE - 10P
200 SF

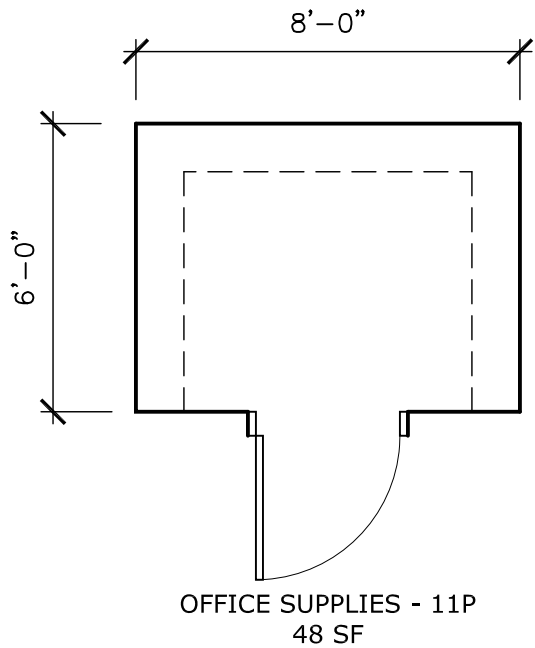


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SKA-11P



PLAN OFFICE SUPPLIES
1/4" = 1'-0"

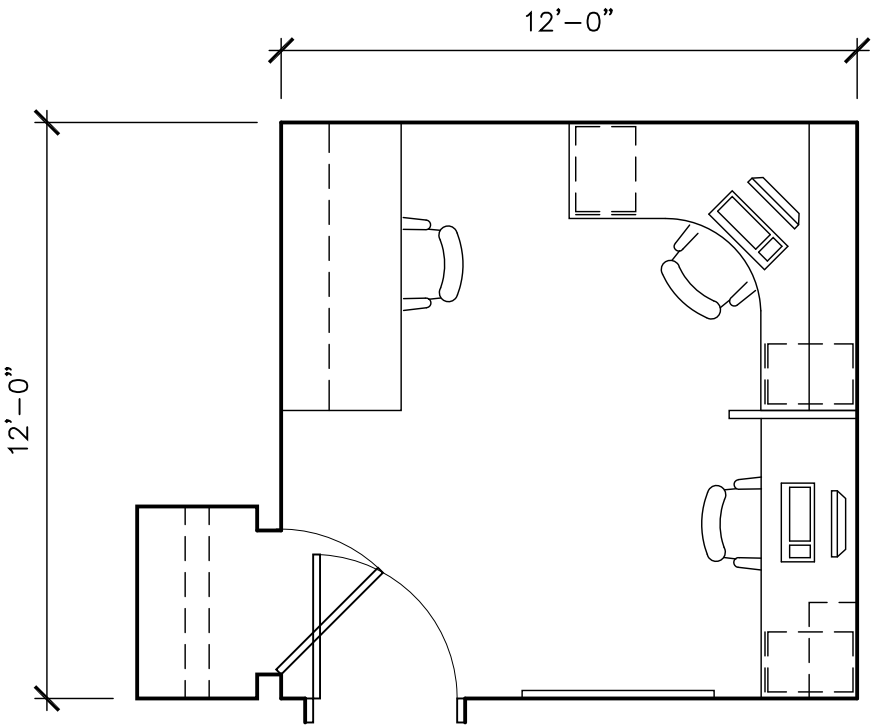


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SKA-12P



IT SUPPORT / ANIMAL CONTROL
- 12P
144 SF

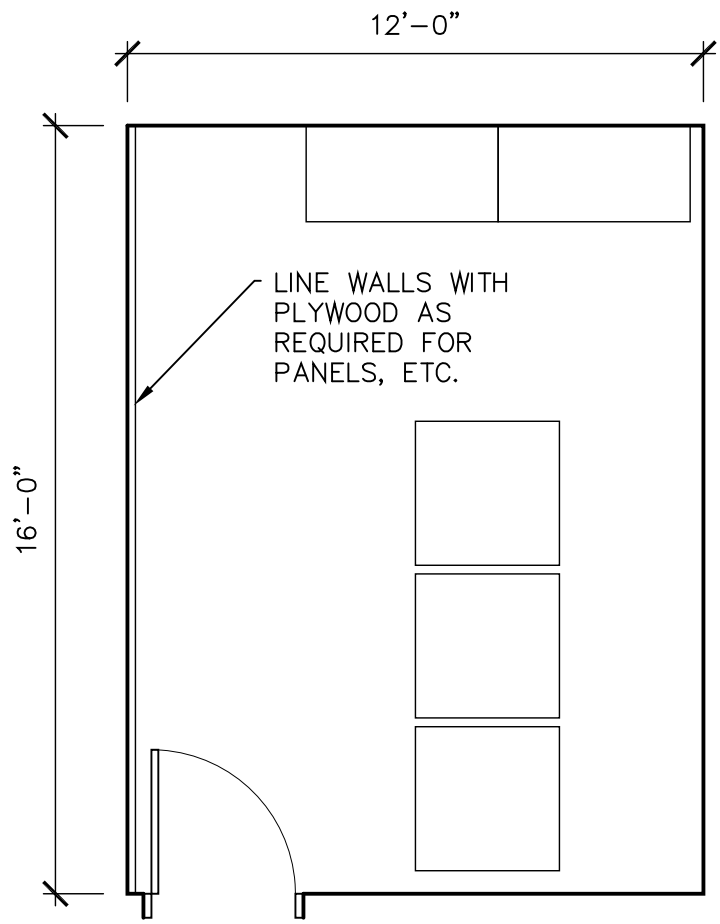


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SKA-13P



SERVER / E911 ROOM - 13P
192 SF



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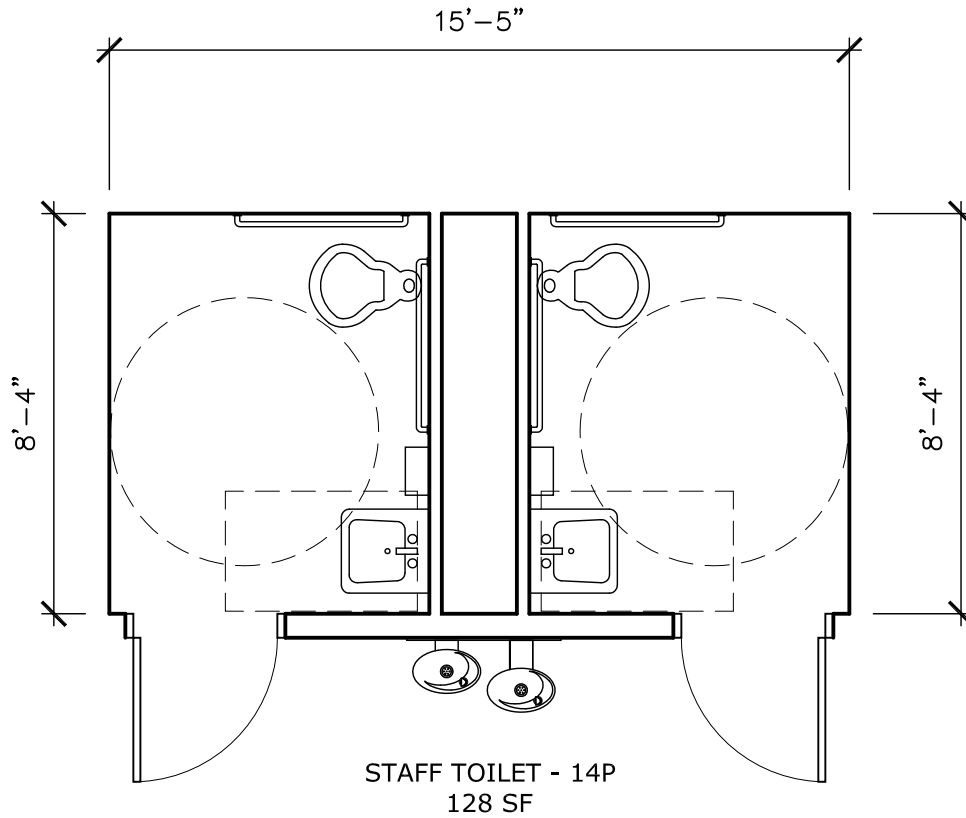
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SKA-14P



PLAN STAFF TOILET
 $1/4" = 1'-0"$

1

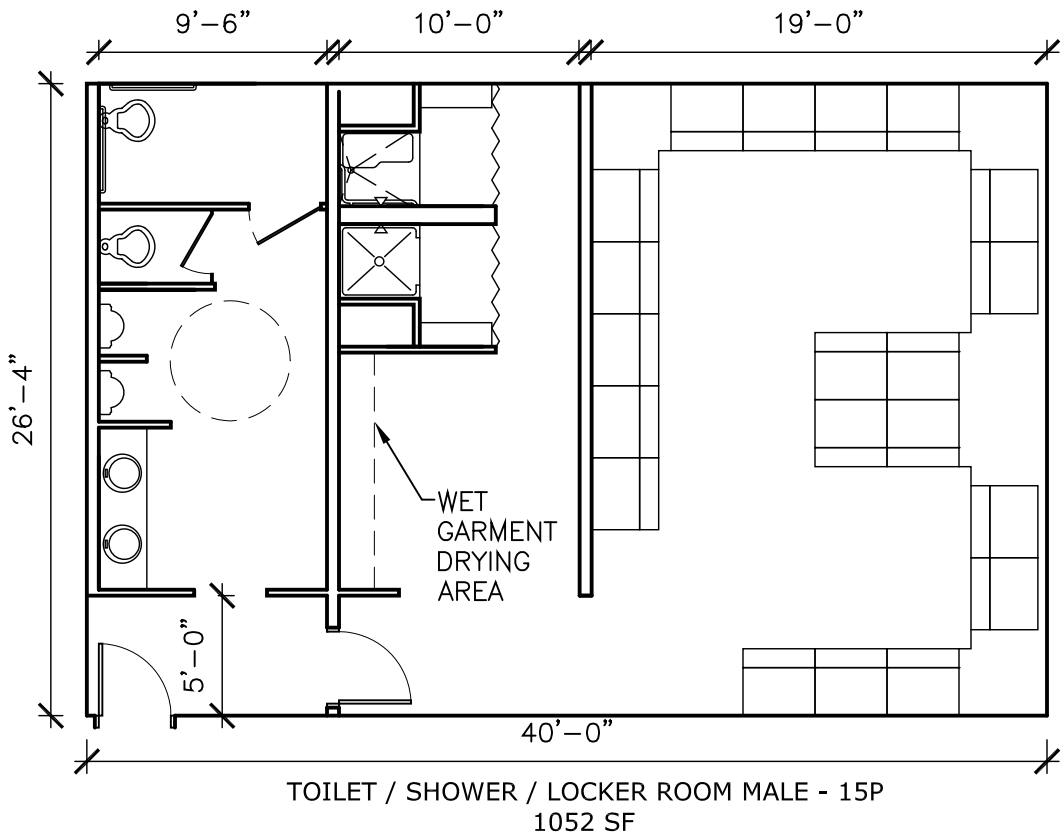


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SKA-15P



PLAN TOILET / SHOWER / LOCKER ROOM - MALE
1/8" = 1'-0"

1

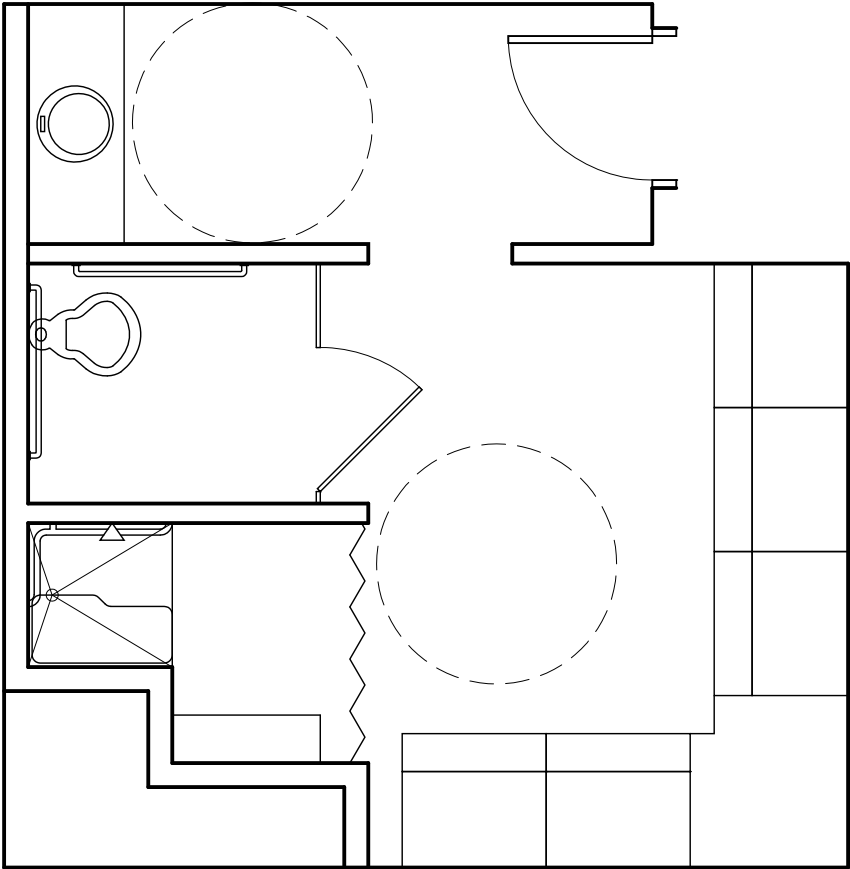


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SKA-16P



TOILET / SHOWER / LOCKER ROOM FEMALE -
16P
295 SF

PLAN TOILET / SHOWER / LOCKER ROOM - FEMALE
1/4" = 1'-0"

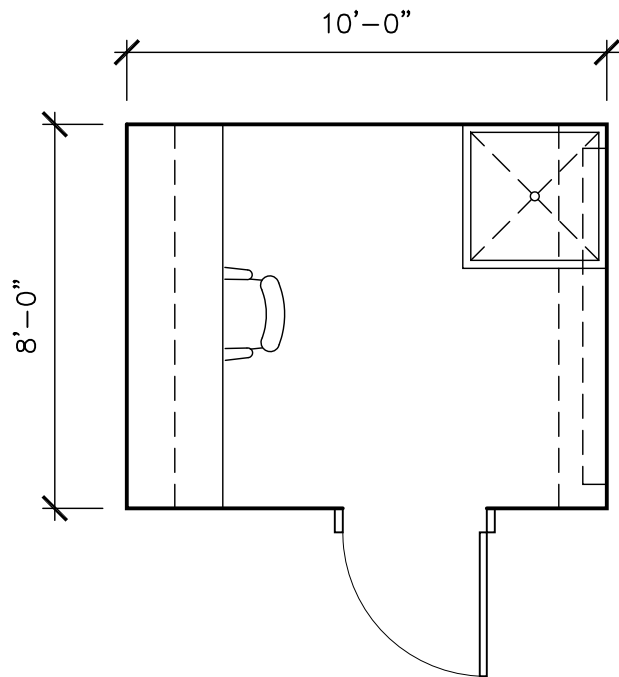


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SKA-17P



JANITOR - 17P
80 SF

PLAN JANITOR
1/4" = 1'-0"

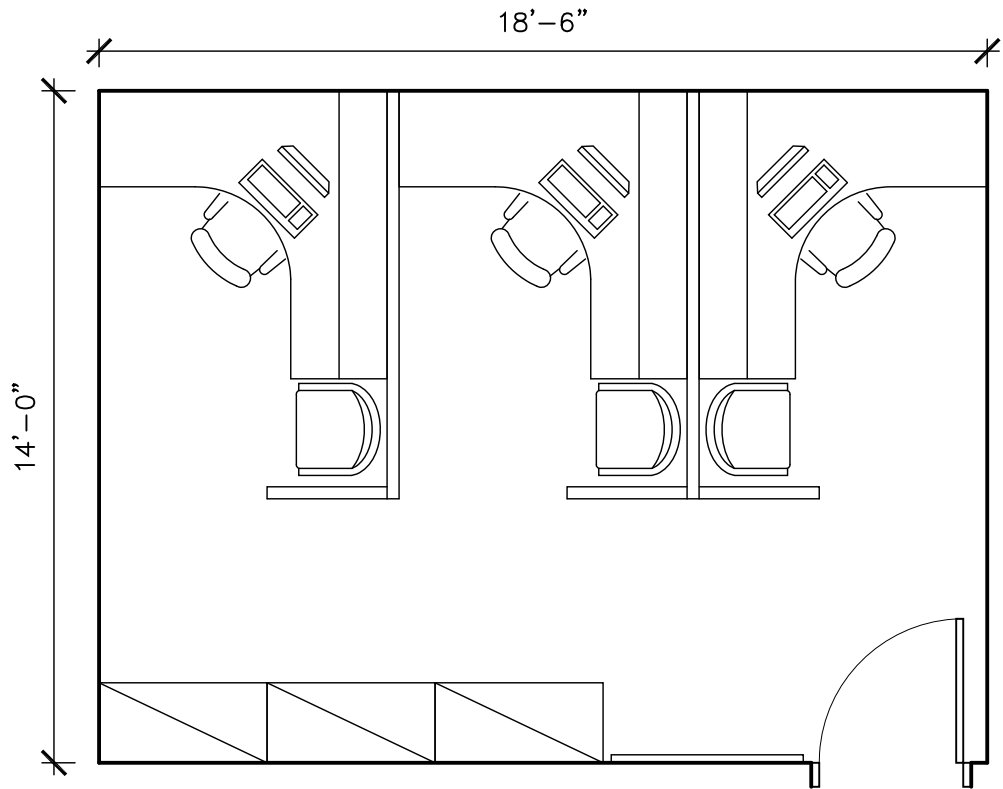


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SKA-18P



SERGEANTS - 18P
260 SF

PLAN SERGEANTS
1/4" = 1'-0"

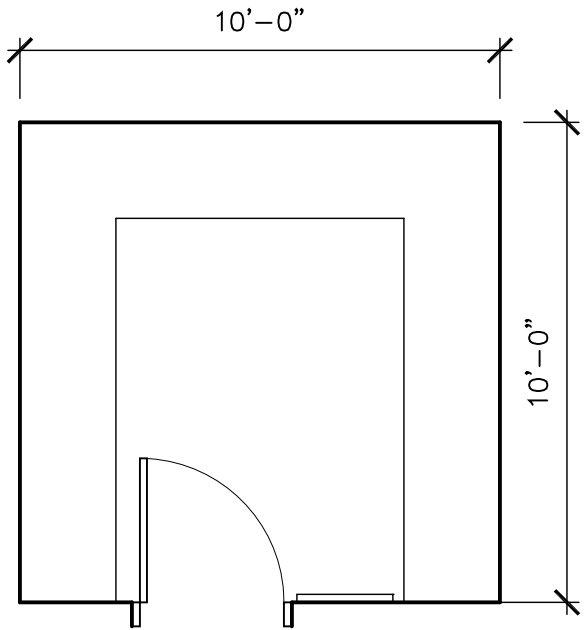


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SKA-19P



POLICE PATROL STORAGE - 19P
100 SF

PLAN POLICE PATROL STORAGE
1/4" = 1'-0"

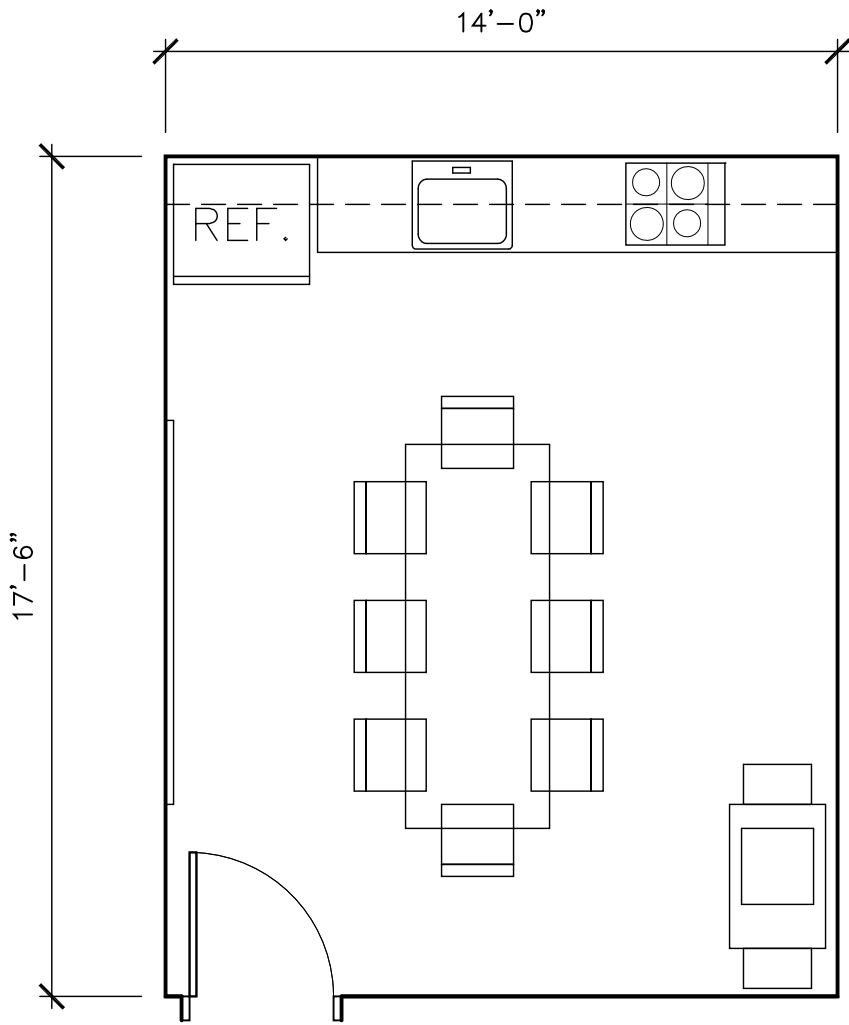


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SKA-20P



ROLL CALL / LUNCH - 20P
245 SF

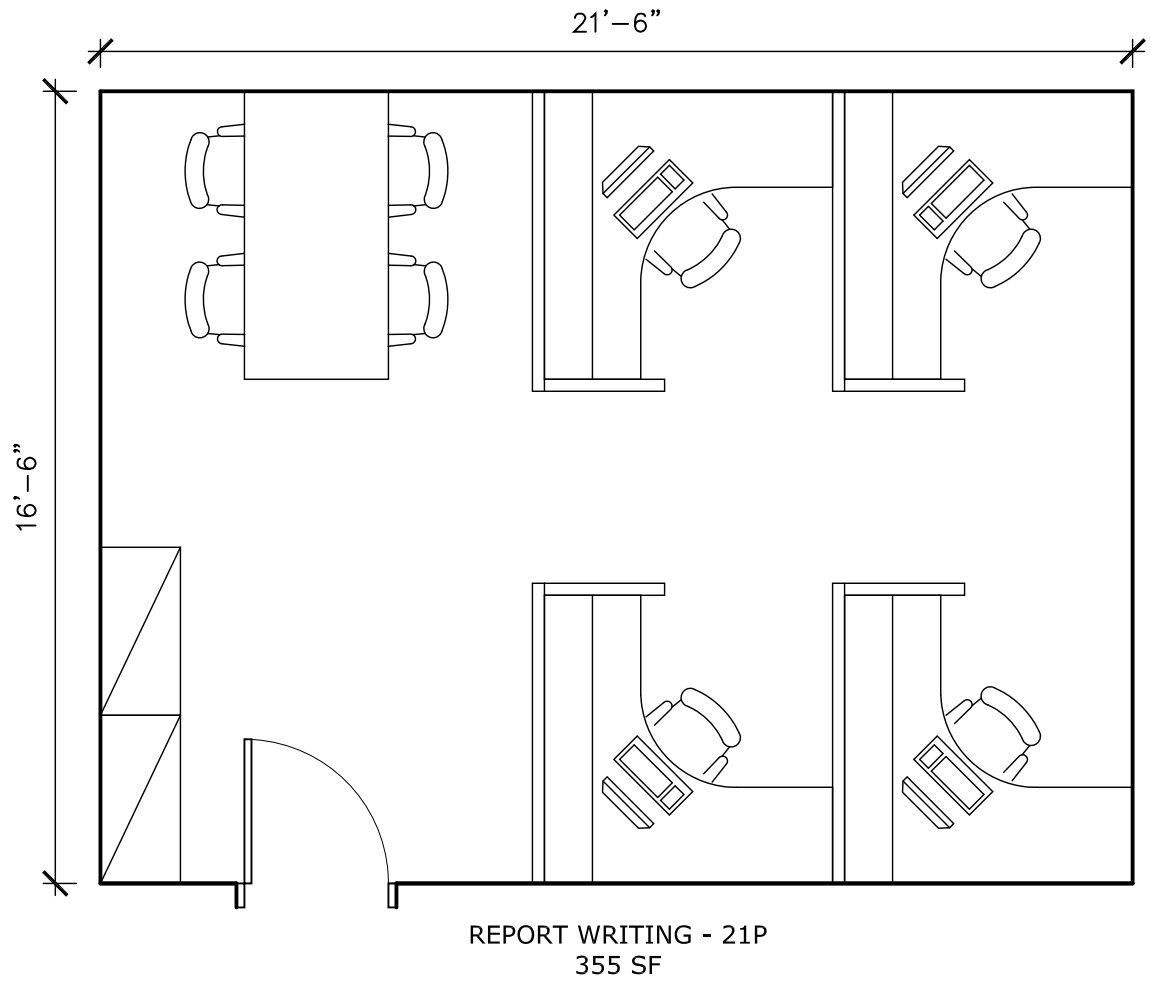


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SKA-21P



PLAN REPORT WRITING
1/4" = 1'-0"

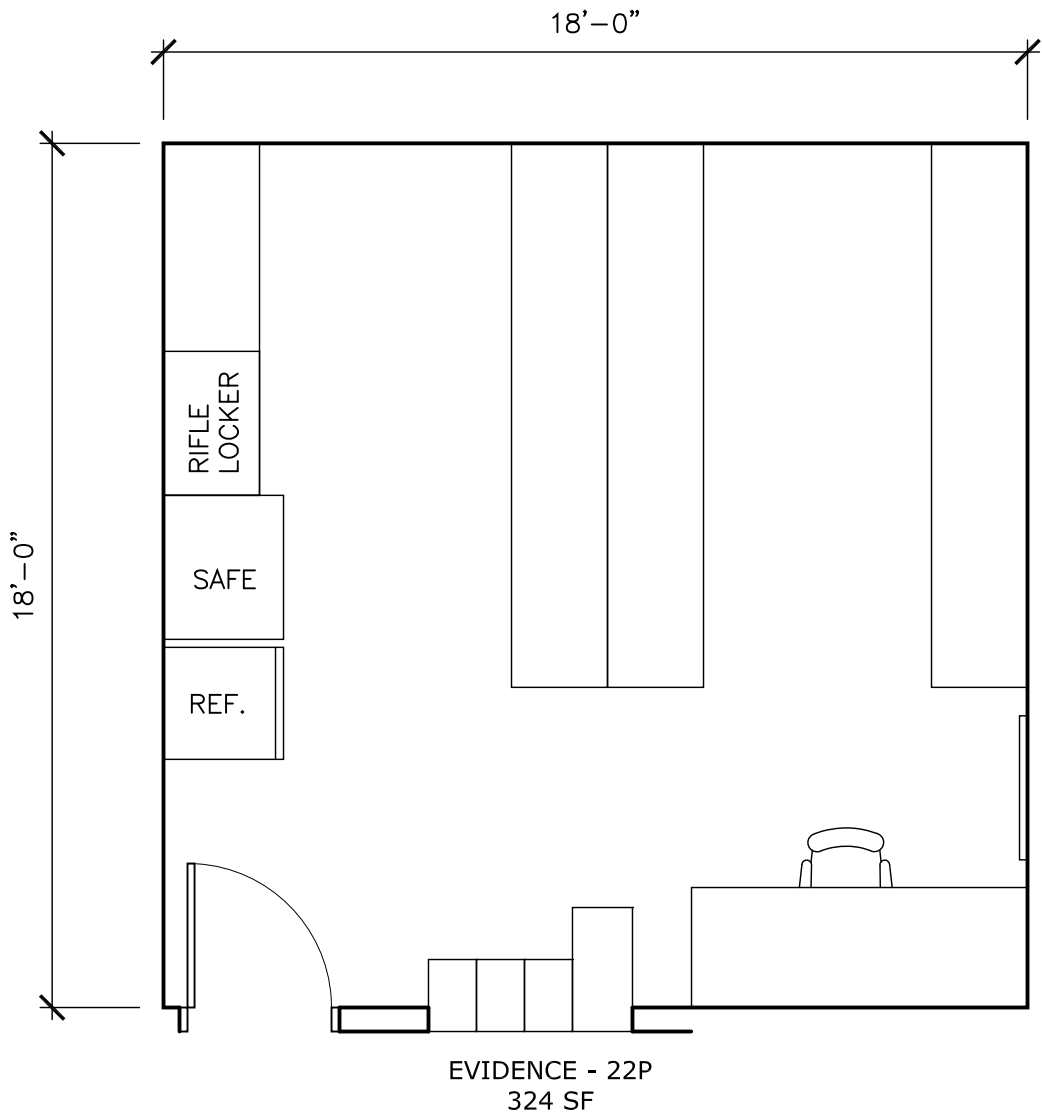


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SKA-22P



PLAN EVIDENCE
 $1/4" = 1'-0"$

1

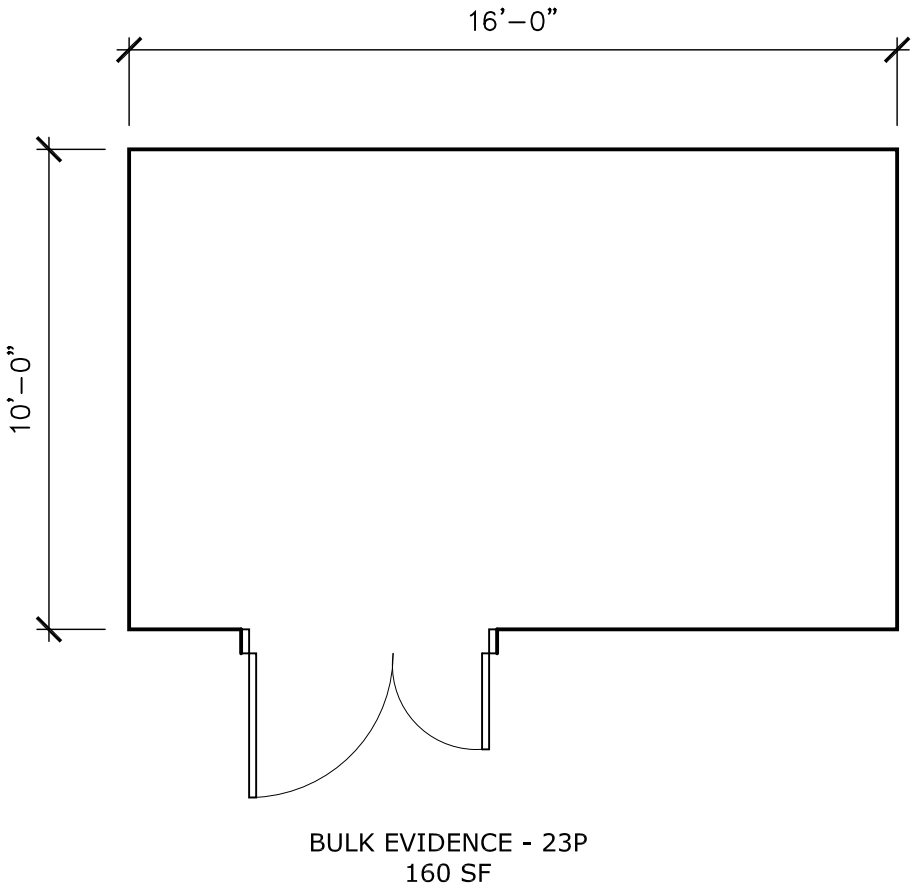


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SKA-23P



PLAN BULK EVIDENCE
1/4" = 1'-0"

1

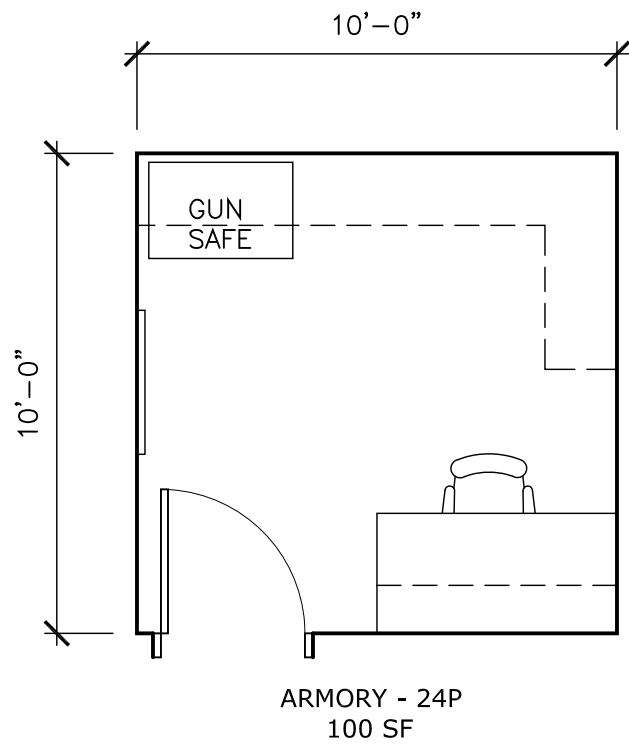


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Project
**BOXBOROUGH PUBLIC SAFETY
FACILITY**
BOXBOROUGH, MA

Date: JAN 15, 2014
Scale: AS NOTED
Job num: 21411
Drawn by: AJD

SKA-24P



PLAN ARMORY
1/4" = 1'-0"

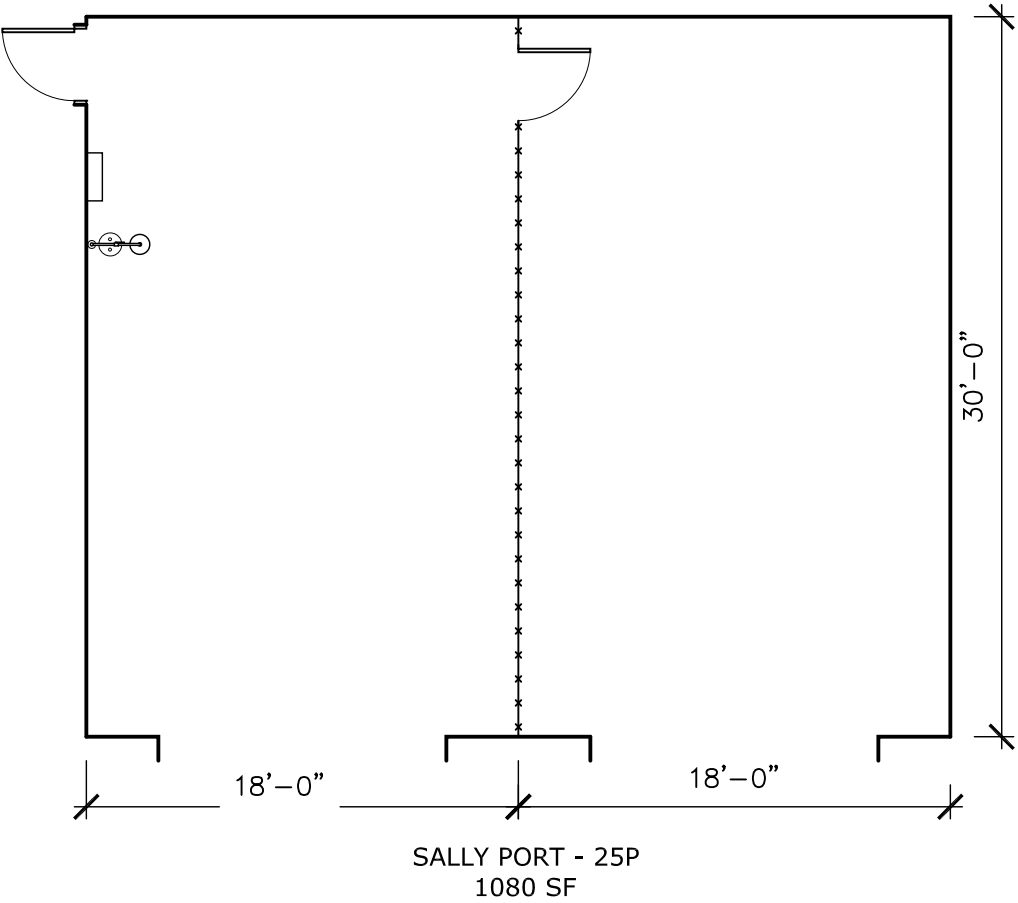


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SKA-25P



PLAN SALLY PORT
1/8" = 1'-0"

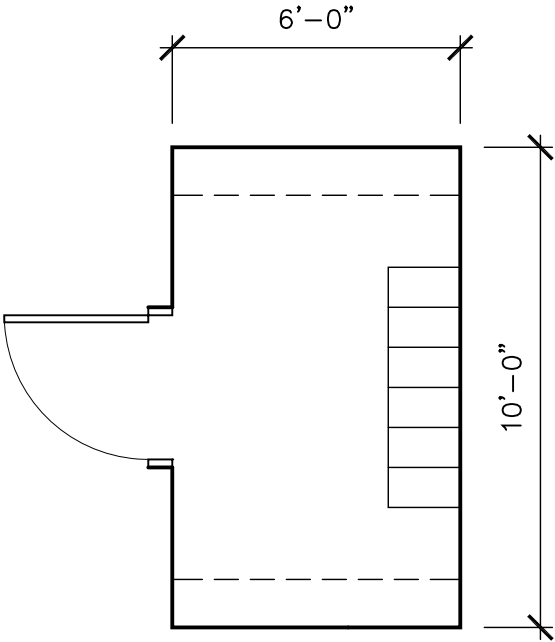


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SKA-26P



TIRE AND PARTS
STORAGE - 26P
60 SF

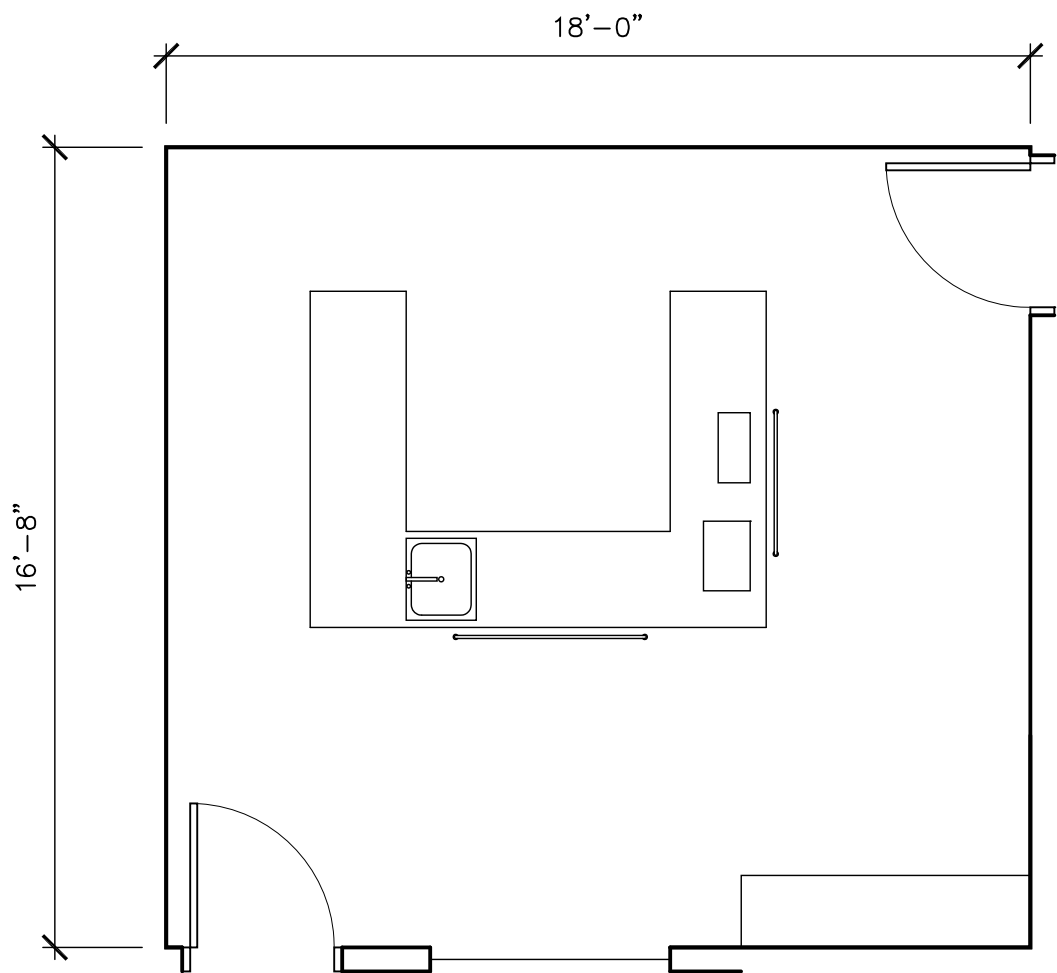


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SKA-27P



BOOKING - 27P
300 SF

PLAN BOOKING
1/4" = 1'-0"

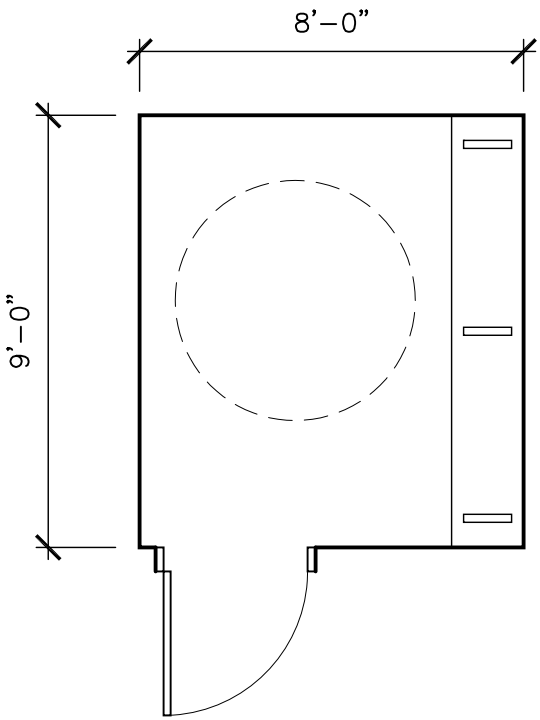


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SKA-28P



BOOKING HOLDING - 28P
72 SF

PLAN BOOKING HOLDING
1/4" = 1'-0"

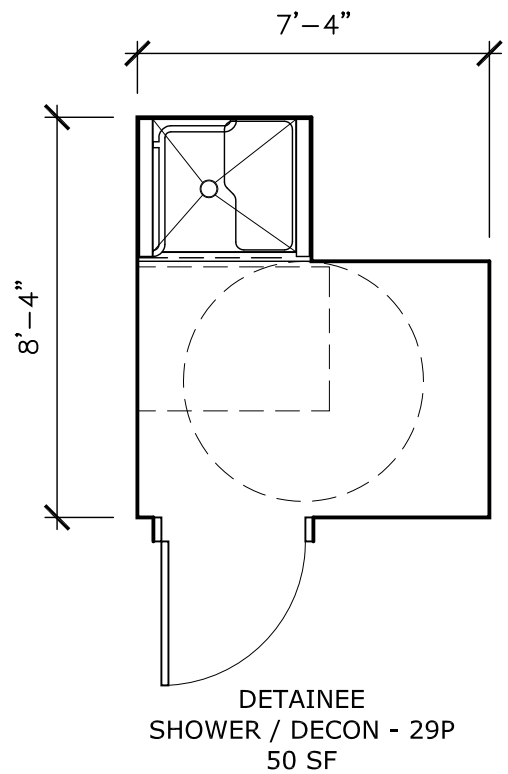


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SKA-29P



PLAN DETAINEE SHOWER / DECON
1/4" = 1'-0"

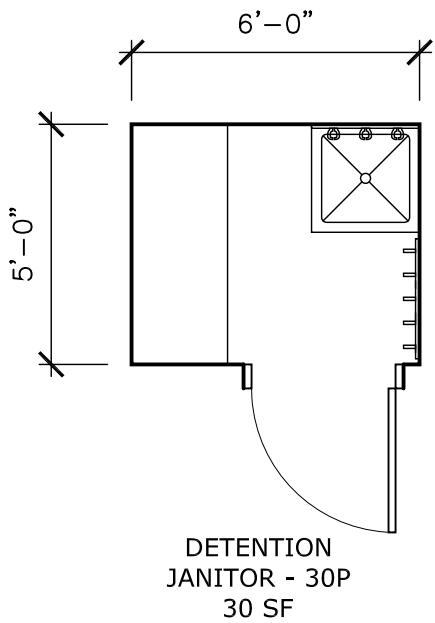


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SKA-30P



PLAN DETENTION JANITOR
1/4" = 1'-0"

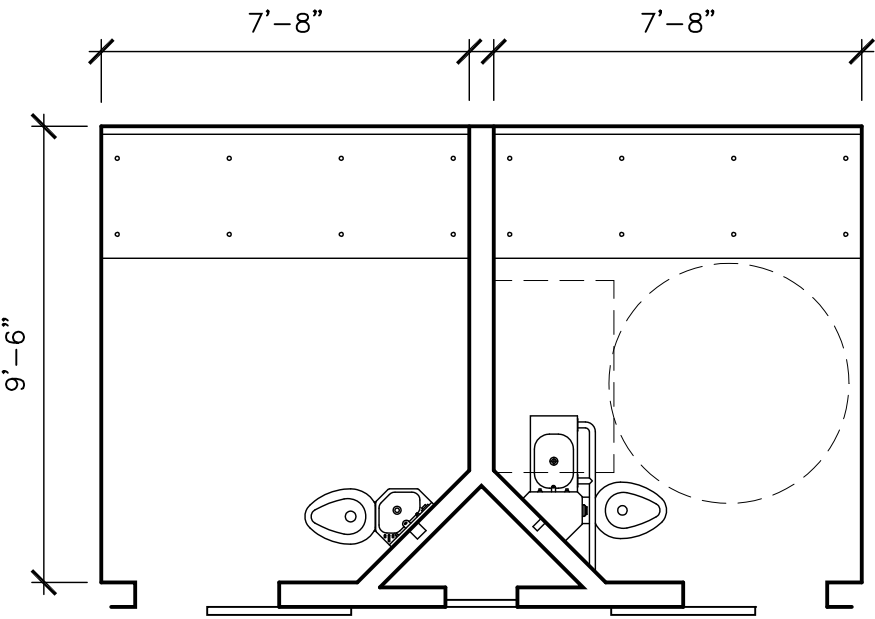


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SKA-31P



DETENTION CELL - MALE - 31P
70 SF EACH
140 TOTAL

PLAN DETENTION CELL - MALE
1/4" = 1'-0"



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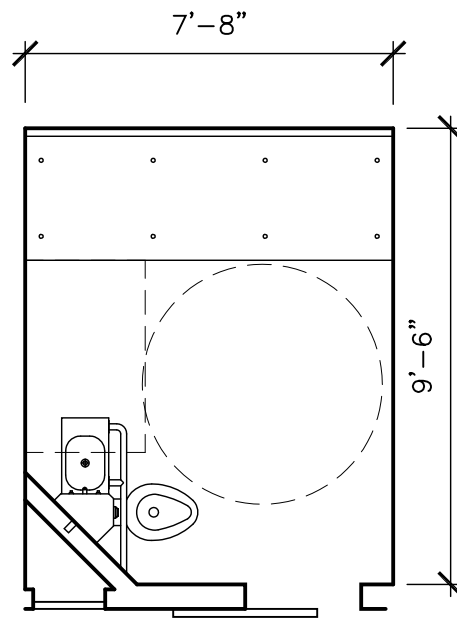
Date: JAN 15, 2014

Scale: AS NOTED

Job num: 21411

Drawn by: AJD

SKA-32P



FEMALE DETENTION CELL - 32P
70 SF

PLAN DETENTION CELL - FEMALE

1/4" = 1'-0"

1



**ROOM DATA SHEETS + SKETCHES –
FIRE DEPARTMENT**

ROOM OR SPACE

Room No: SKA-1F
Description: **Fire Chief Office**
Name: Chief White
Group: Administration - Fire

Quantitative Criteria: 1 220
Square feet
2 Meets with 1-2 people

Functional Description: 1 Deskwork
2 Small Meetings

Qualitative Description: 1 Private Office

Locational Criteria: 1 Central access to administrative offices
2 Near Conference Room
3 Within a suite with Administrative Assistant & Deputy Chief
4 Remote from staff areas

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV, CCTV, speaker, wall mounted computer monitor (for meetings)

Furnishings: 1 Desk with return
2 Seating - 1 office with 4 guest chairs
3 Bookshelves
4 File cabinets
5 Whiteboard / Tackboard
6 36" diameter meeting table

Notes: Small closet within room
Acoustically private

ROOM OR SPACE

Room No: SKA-2F
Description: **Administrative Assistant**
Name:
Group: Administration - Fire

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Deskwork
2 Available to public
3 Active File Storage

Qualitative Description: 1 Open office area

Locational Criteria: 1 Adjacent to Lobby
2 Within a suite with Fire Chief & Deputy Chief
3 Remote from staff areas

Technical Criteria:
Walls: GWB, Office Standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV, CCTV

Furnishings: 1 Desk with return
2 Seating - 1 office
3 Adjustable shelving on standards
4 File cabinets
5 Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-3F
Description: **Deputy Fire Chief**
Name:
Group: Administration - Fire

Quantitative Criteria: 1 120
Square feet
2 Meets with 1-2 people

Functional Description: 1 Deskwork
2 Small Meetings

Qualitative Description: 1 Private Office

Locational Criteria: 1 Central access to administrative offices
2 Within a suite with Fire Chief & Administrative Assistant
3 Remote from staff areas

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV, CCTV, speaker

Furnishings: 1 Desk with return
2 Seating - 1 office with 2 guest chairs
3 Adjustable shelving on standards
4 File cabinets
5 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-4F
Description: **Captain**
Name:
Group: Administration - Fire

Quantitative Criteria: 1 120
Square feet
2 Meets with 1-2 people

Functional Description: 1 Deskwork
2 Small Meetings

Qualitative Description: 1 Private Office

Locational Criteria: 1 Central access to administrative offices

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV, CCTV, speaker

Furnishings: 1 Desk with return
2 Seating - 1 office with 2 guest chairs
3 Adjustable shelving on standards
4 File cabinets
5 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-5F
Description: **Shared Office**
Name: Fire Prevention, EMS Coordinator, Training Officer, Future/Call
Group: Administration - Fire

Quantitative Criteria: 1 240
Square feet

Functional Description: 1 Deskwork

Qualitative Description: 1 Shared Office for 4

Locational Criteria: 1 Central access to administrative offices

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Office Lock
Equipment: Computer, CATV, CCTV, speaker, radio chargers

Furnishings: 1 4 Desks with returns
2 Seating - 4 office with 1 guest chair
3 Adjustable shelving on standards
4 File cabinets
5 Whiteboard / Tackboard

Notes: Include shelving for radio chargers, spare batteries, etc.

ROOM OR SPACE

Room No: SKA-6F
Description: **Plan Review / Office Equipment / Supplies**
Name:
Group: Administration - Fire

Quantitative Criteria: 1 144
Square feet

Functional Description: 1 Storage for building plans

Qualitative Description: 1 Storage building plans
2 Plan review
3 Multi-purpose use with office equipment and supplies

Locational Criteria: 1 Near Shared Office

Technical Criteria:

Walls: GWB, office standard
Floors: Carpet
Ceiling: Acoustic Tile
Windows: NA
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Storage Lock
Equipment: Copier, fax machine, mailing equipment

Furnishings: 1 Flat file cabinets
2 Upright mobile roll files
3 Rectangular table for plan review
4 Guest seating for 2
5 Whiteboard / Tackboard
6 Adjustable shelving on standards
7 Storage for paper and ink
8 Storage for office supplies
9 Worksurface

Notes:

ROOM OR SPACE

Room No: SKA-7F
Description: **Archival Document Storage**
Name:
Group: Administration - Fire

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Secure storage for records

Qualitative Description: 1 Dry, well lit and secure

Locational Criteria: 1 Near administrative staff
2 Remote location possible

Technical Criteria:

Walls: GWB, Office Standard
Floors: Resilient
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: Standard Office Environment
Ventilation: Standard Office Environment
Lighting: Direct/Indirect
Power: Standard Office Environment
Tel/Data: Standard Office Environment
Security: Standard Storage Lock
Equipment: None

Furnishings: 1 Shelving on Standards above lateral or standard files
2 File cabinets

Notes: Flexibility to be used as an office in the future.

ROOM OR SPACE

Room No: SKA-8F
Description: **Coat Closet**
Name:
Group: Administration - Fire

Quantitative Criteria: 1 13
Square feet - (1) @ 2.5' x 5'

Functional Description: 1 Personal Belongings

Qualitative Description: 1 Closet for storage

Locational Criteria: 1 Central to administration staff

Technical Criteria:

Walls: GWB
Floors: Carpet or resilient
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: NA
Ventilation: NA
Lighting: NA
Power: None
Tel/Data: None
Security: Standard Closet Lock
Equipment: None

Furnishings: 1 Coat rod with shelf above

Notes:

ROOM OR SPACE

Room No: SKA-9F
Description: **Staff Toilet 1 set of 2**
Name:
Group: Administration - Fire

Quantitative Criteria: 1 128
Square feet (per set)

Functional Description: 1 Men's and Women's Toilet
2 Fully accessible

Qualitative Description: 1 Toilet area

Locational Criteria: 1 General office area

Technical Criteria:

Walls: GWB/Ceramic Tile
Floors: Ceramic Tile
Ceiling: GWB or acoustic tile
Windows: None
Plumbing: Standard Toilet Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct/Indirect
Power: Standard Toilet Environment
Tel/Data: None
Security: Standard Toilet Room Lock
Equipment: None

Furnishings: 1 Mirror
2 Soap dispenser
3 Towel dispenser/trash receptacle
4 Feminine dispenser and receptacle
5 Toilet paper dispenser
6 Coat hook
7 Shelving

Notes:

ROOM OR SPACE

Room No: SKA-10F
Description: **Dorm Rooms**
Name:
Group: Staff Support - Fire

Quantitative Criteria: 1 420
Square feet
2 Sized for one twin bed, 1 nightstand, 2 wardrobes, 1 guest chair

Functional Description: 1 (3) single occupancy sleeping rooms sized for future doubles

Qualitative Description: 1 Good ventilation
2 Quiet

Locational Criteria: 1 Adjacent to locker rooms

Technical Criteria:

Walls: GWB
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard
Ventilation: Standard
Lighting: Indirect and Task
Power: Standard
Tel/Data: Standard
Security: Standard Office Lock
Equipment: Telephone; speaker; station alert system for light control

Furnishings: 1 Twin bed
2 Nightstand
3 Guest chair
4 Storage for linens / personnel items in wardrobe/locker
5 Blackout shades

Notes: (2) current, (4) future 30"x24" wardrobes

ROOM OR SPACE

Room No: SKA-11F
Description: **LT's Dorm Room**
Name:
Group: Staff Support - Fire

Quantitative Criteria: 1 140
Square feet
2 Sized for one twin bed, 1 nightstand, 1 desk, 4 wardrobes

Functional Description: 1 Single occupancy sleeping rooms
2 Room for private study

Qualitative Description: 1 Good ventilation
2 Quiet

Locational Criteria: 1 Adjacent to locker rooms

Technical Criteria:

Walls: GWB
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard
Ventilation: Standard
Lighting: Indirect and Task
Power: Standard
Tel/Data: Standard
Security: Standard Office Lock
Equipment: Telephone; speaker; station alert system for light control

Furnishings: 1 Twin bed
2 Nightstand
3 Desk
4 Office chair
5 Storage for linens / personnel items in wardrobe/locker
6 Blackout shades

Notes: (4) 30"x24" wardrobes

ROOM OR SPACE

Room No: SKA-12F
Description: **Study Room**
Name:
Group: Staff Support - Fire

Quantitative Criteria: 1 100
Square feet

Functional Description: 1 Room for private study
2 Room for distance learning

Qualitative Description: 1 Good ventilation
2 Quiet

Locational Criteria: 1 Near Dorm Rooms

Technical Criteria:

Walls: GWB
Floors: Carpet
Ceiling: Acoustic Tile
Windows: Required
Plumbing: NA
HVAC: Standard
Ventilation: Standard
Lighting: Indirect and Task
Power: Standard
Tel/Data: Standard
Security: Standard Office Lock
Equipment: Telephone; speaker; station alert system for light control

Furnishings: 1 Desk
2 Office chair
3 Lounge chair
4 End table
5 Bookcases
6 Whiteboard / Tackboard

Notes:

ROOM OR SPACE

Room No: SKA-13F
Description: **Toilet / Shower / Locker Room Male**
Name:
Group: Staff Support - Fire

Quantitative Criteria: 1 814
Square feet

Functional Description: 1 Toilet / Lavatory
2 Showers with dressing area
3 Lockers

Qualitative Description: 1 Multiple occupant space
2 Secure
3 Good ventilation
4 Durable Materials

Locational Criteria: 1 Adjacent to staff quarters

Technical Criteria:

Walls: GWB with epoxy paint; Ceramic Tile wainscot
Floors: Ceramic Tile or Resinous flooring
Ceiling: Acoustic Tile and GWB
Windows: None
Plumbing: Standard Toilet Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct/Indirect
Power: Standard Toilet Environment
Tel/Data: One outlet
Security: Standard Toilet Room Lock
Equipment: Speakers for radio monitoring

Furnishings: 1 Mirrors
2 Soap dispensers
3 Towel dispenser/trash receptacle
4 Toilet paper dispensers
5 Showers with bench seats
6 Clothing hooks
7 Lockers with integral benches - (18) 24"x24" and (5) 18"x24"

Notes: Provide wet garment drying area

ROOM OR SPACE

Room No: SKA-14F
Description: **Toilet / Shower / Locker Room Female**
Name:
Group: Staff Support - Fire

Quantitative Criteria: 1 239
Square feet

Functional Description: 1 Toilet / Lavatory
2 Showers with dressing area
3 Lockers

Qualitative Description: 1 Multiple occupant space
2 Secure
3 Good ventilation
4 Durable Materials

Locational Criteria: 1 Adjacent to staff quarters

Technical Criteria:

Walls: GWB with epoxy paint; Ceramic Tile wainscot
Floors: Ceramic Tile or Resinous flooring
Ceiling: Acoustic Tile and GWB
Windows: None
Plumbing: Standard Toilet Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct/Indirect
Power: Standard Toilet Environment
Tel/Data: One outlet
Security: Standard Toilet Room Lock
Equipment: Speakers for radio monitoring

Furnishings: 1 Mirrors
2 Soap dispensers
3 Towel dispenser/trash receptacle
4 Toilet paper dispensers
5 Showers with bench seats
6 Clothing hooks
7 Lockers with integral benches - (2) 24"x24" and (2) 18"x24"
8 Feminine napkin disposal

Notes: Provide wet garment drying area

ROOM OR SPACE

Room No: SKA-15F
Description: **Day Room**
Name:
Group: Staff Support - Fire

Quantitative Criteria:

1	396
	Square feet
2	Current needs 2 to 4 people at a time; future 6 to 8 people
3	Dedicated only to "living" needs

Functional Description:

1	Watching TV/Videos; Listening to music
2	Informal meeting
3	Informal dining

Qualitative Description:

1	Comfortable relaxed environment
2	Natural lighting

Locational Criteria:

1	Easy access to apparatus bays
2	Adjacent to Kitchen

Technical Criteria:

Walls:	GWB
Floors:	Carpet or Resilient
Ceiling:	Acoustic Tile
Windows:	Required
Plumbing:	NA
HVAC:	Standard
Ventilation:	Standard
Lighting:	Indirect and task
Power:	Standard
Tel/Data:	Standard
Security:	NA
Equipment:	TV/Video equipment

Furnishings:

1	Comfortable chairs
2	Entertainment Center
3	Bookshelves
4	Side tables
5	Dining table and chairs for 6

Notes:

ROOM OR SPACE

Room No: SKA-16F
Description: **Kitchen**
Name:
Group: Staff Support - Fire

Quantitative Criteria:

1	168
	Square feet
2	Provide space for 4 people

Functional Description:

1	Food storage and preparation
---	------------------------------

Qualitative Description:

1	Commercial kitchen equipment
2	Accessible and open
3	Easy to maintain/clean
4	Good ventilation

Locational Criteria:

1	Adjacent to day room
2	Easy access to apparatus bays

Technical Criteria:

Walls:	GWB
Floors:	Resilient slip resistant
Ceiling:	Acoustic Tile - scrubbable
Windows:	Preferred
Plumbing:	Standard Kitchen Environment
HVAC:	Standard Kitchen Environment
Ventilation:	Standard Kitchen Environment
Lighting:	Direct/Indirect
Power:	Standard Kitchen Environment
Tel/Data:	Standard
Security:	NA
Equipment:	Refrigerator, commercial cooktop/oven with hood and auto remote shut-off on apparatus floor, microwave, toaster oven, coffee maker, dishwasher, garbage disposal, 2 bowl sink

Furnishings:

1	Wall and base cabinets
2	Stools at counter
3	Provisions for recycling and trash
4	Food storage pantries for 4 shifts

Notes: Provide auto remote stove/oven shut-off in the apparatus bays

ROOM OR SPACE

Room No: SKA-17F
Description: **Janitor's Closet**
Name:
Group: Staff Support - Fire

Quantitative Criteria: 1 36
Square feet
2 1 required per floor (see notes)

Functional Description: 1 House janitorial supplies

Qualitative Description: 1 Durable materials

Locational Criteria: 1 One required per level

Technical Criteria:

Walls: Moisture Resistant GWB
Floors: Ceramic Tile, resinous, linoleum
Ceiling: GWB
Windows: None
Plumbing: Standard Janitors Environment
HVAC: Standard Toilet Environment
Ventilation: Standard Toilet Environment
Lighting: Direct
Power: Standard Toilet Environment
Tel/Data: None
Security: Standard Lock
Equipment: None

Furnishings: 1 Janitors sink or mop sink
2 Rack for mops, brooms etc.
3 Shelving

Notes: Per Code, one Janitor's closet required per floor. If the building is a 2-story shared facility, assume 1 shared Janitor's closet for shared spaces, 1 Janitor in FD to be used by FD staff for cleaning living quarters and 1 Janitor in PD for use by PD/DPW Facility Maintenance.

ROOM OR SPACE

Room No: SKA-18F
Description: **Apparatus Bays**
Name:
Group: Operations - Fire

- Quantitative Criteria:**
- 1 10,080
Square feet
 - 2 Sized for access to all sides and tops of vehicles
 - 3 14 x 14 overhead doors - Glass in doors
 - 4 Vehicles:
 - a. Engine 61 (Brush Truck) - 1999 Ford F350 23'L x 8'W)
 - b. Engine 62 - 2000 Pierce Saber (31'L x 8'W)
 - c. Engine 63 - 2009 Pierce Saber (31'L x 8'W)
 - d. Engine 64 - 1994 Ford F800 (31'L x 8'W)
 - e. Hose Wagon 65 - 1984 Ford F9000 (27'L x 8'W)
 - f. Ambulance A-1 - 2013 Ford F450 (25'L x 8'W)
 - g. Tender 67 - 2009 Kenworth (36'L x 8'W)
 - h. Car 1 - 2013 Chevrolet Tahoe - (16'-6"L x 6'-6"W)
 - i. Car 60 - 2004 Ford Expedition (17'-2"L x 6'-7"W)
 - j. Boat (14'L x 6'W)
 - k. Lighting Trailer (15'L x 6'W)
 - l. MDU Trailer (Decon) (16'L x 8'W)
 - m. Hazard Trailer (20'L x 8'-6"W)
 - n. FD Shelter Trailer (17'L x 8'W)
 - o. BERC Shelter Trailer (17'L x 8'W)
 - p. Future Ladder Truck (49'L x 8'W)
 - 5 Double Deep Bays - Drive-thru preferred for min 2 bays

- Functional Description:**
- 1 House fire apparatus
 - 2 House ambulance
 - 3 House trailers, portable pumps and generators

- Qualitative Description:**
- 1 Easy access to trucks
 - 2 Easy access to gear
 - 3 Clear span for maximum flexibility
 - 4 Good air quality
 - 5 Adequate height for clearance and maintenance of vehicles
 - 6 Natural light

- Locational Criteria:**
- 1 Excellent access from living quarters and day room
 - 2 Adjacent to maintenance and fire equipment support areas
 - 3 Good access to exterior

- Technical Criteria:**
- Walls: CMU or high impact GWB
- Floors: Epoxy Resin or Concrete with non slip surface
- Ceiling: Exposed to structure
- Windows: Required using natural light thru doors and clerestory
- Plumbing: Floor drains, compressed air connections; fill lines; tight tanks
- HVAC: No air conditioning; radiant heat

Ventilation:		Source Capture exhaust; standard garage and emergency CO monitor and vent system
Lighting:		High bay fluorescent or LED light fixtures
Power:		Throughout for repair including reel for maintenance
Tel/Data:		Required: 2 locations?
Security:		Locked to secure equipment when firefighters are on calls; overhead doors to have multiple systems for closing down doors
Equipment:		Air and water lines; overhead door controls; Source capture system; Operable racks for lifting hoses; training equipment (stairs and ladders, dry stand pipe hook-up, rapelling connections, roof hatch, floor hatch, operable windows/doors at multiple levels)
Furnishings:	1	White Board
	2	Bulletin Board
Notes:		Total count of bays and bay depth is site dependent. Prefer drive thru capability.

ROOM OR SPACE

Room No: SKA-19F
Description: **Hose Storage**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 120
Square feet
2 Portable racks (1 existing and 1 new)

Functional Description: 1 Storing Hose on racks

Qualitative Description: 1 Good Lighting

Locational Criteria: 1 Adjacent to vehicle bays
2 Adjacent to maintenance and fire equipment support areas

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy Resinous or Concrete with non slip surface
Ceiling: Exposed to structure
Windows: Not required
Plumbing: NA
HVAC: Same as apparatus bays
Ventilation: Same as apparatus bays
Lighting: Same as apparatus bays
Power: Same as apparatus bays
Tel/Data: None Required
Security: None Required
Equipment: None Required

Furnishings: 1 Hose storage racks (1 existing 8'-6" x 3'-0" and 1 new)

Notes:

ROOM OR SPACE

Room No: SKA-20F
Description: **Gear Storage**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 405
Square feet
2 Gear Lockers

Functional Description: 1 Stores turnout gear and equipment

Qualitative Description: 1 Easy access to vehicle bays
2 Good ventilation for drying gear/pressurized

Locational Criteria: 1 Adjacent but separate from vehicle bays

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: None
Plumbing: NA
HVAC: Standard
Ventilation: Standard
Lighting: Standard
Power: Standard; radio chargers
Tel/Data: Standard
Security: None
Equipment:

Furnishings: 1 (30) Lockers - existing to be reused
2 Shelving for portable radio chargers

Notes: Room dimensions should accommodate existing lockers - 20"D x 24"W?

Provide two (2) doors entering the room. Room experiences high traffic during calls.

ROOM OR SPACE

Room No: SKA-21F
Description: **Laundry**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 156
Square feet

Functional Description: 1 Room for washing and drying turnout gear
2 Washing and drying of bed linens and clothing

Qualitative Description: 1 Easy access to apparatus bays
2 Good ventilation for drying gear/pressurized

Locational Criteria: 1 Adjacent but separate from vehicle bays

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: None
Plumbing: As required for washers; utility sink; floor drains
HVAC: Standard
Ventilation: Standard; ventilation for dryers
Lighting: Direct
Power: Standard; as required for equipment
Tel/Data: Standard
Security: None
Equipment: Extractor (existing), commercial washer and dryer (new), gear dehydrator (existing), ice machine (existing)

Furnishings: 1 12" D adjustable shelving
2 Countertop

Notes:

ROOM OR SPACE

Room No: SKA-22F
Description: **Maintenance Workshop**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 200
Square feet

Functional Description: 1 Storage of tools and parts - rolling tool box
2 Minor repair work
3 Storage of flammable materials (ventilated)

Qualitative Description: 1 Flexible repair work environment
2 Good lighting

Locational Criteria: 1 Adjacent to apparatus area

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Preferable
Plumbing: As required.
HVAC: Standard shop environment
Ventilation: Standard shop environment
Lighting: Direct/indirect
Power: Standard shop environment, wiremold
Tel/Data: Required
Security: Locked
Equipment: Bench tools; vise; grinders; air powered tools

Furnishings: 1 Workbenches
2 Shelving on standards
3 Metal Cabinet for flammable materials
4 Locked Metal Cabinet for small part storage
5 Peg Boards
6 Rolling tool box

Notes: Space to be shared with the Police Department

ROOM OR SPACE

Room No: SKA-23F
Description: **Medical Cleaning / Decontamination**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 120
Square feet

Functional Description: 1 Cleaning of medical equipment
2 Cleaning of other equipemnt
3 Decontamination of personnel or gear

Qualitative Description: 1 Clear working space for equipment
2 Wet environment

Locational Criteria: 1 Off apparatus bays
2 Near ambulance bay

Technical Criteria:

Walls: CMU or impact resistant GWB, FRP or Ceramic Tile
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure or scrubbable ACT
Windows: None required
Plumbing: Floor drains, water service, deep sink with built in drainboards, washdown area for backboards or other large equipment with flexible deluge shower and eye wash
HVAC: Standard
Ventilation: Standard
Lighting: Direct
Power: Standard
Tel/Data: Required
Security: Secured
Equipment: None

Furnishings: 1 Base Cabinets
2 Wall Cabinets
3 Open Shelving
4 Bench and clothes hooks

Notes:

ROOM OR SPACE

Room No: SKA-24F
Description: **SCBA Fill Room**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 108
Square feet
2 Source of clean air

Functional Description: 1 Fill area for breathing apparatus - tanks

Qualitative Description: 1 Clean
2 Secure

Locational Criteria: 1 Adjacent to vehicle bays
2 Adjacent to compressor area

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Not required
Plumbing: Direct source of intake air to outside; tap into cascade compressor for station air
HVAC: Standard
Ventilation: Standard
Lighting: Direct
Power: Standard
Tel/Data: Required
Security: Secured area
Equipment: Cascade System

Furnishings: 1 SCBA bottle cart for 6
2 Work bench
3 Adjustable shelving

Notes:

ROOM OR SPACE

Room No: SKA-25F
Description: **Air Compressor**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 40
Square feet

Functional Description: 1 Compressed air for air lines throughout apparatus area

Qualitative Description: 1 Noisy; isolate acoustically

Locational Criteria: 1 Adjacent to apparatus bays

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Not required
Plumbing: Compressed air lines
HVAC: Standard
Ventilation: Standard; direct outside if possible
Lighting: Direct
Power: To accommodate equipment
Tel/Data: Required
Security: Standard storage lock
Equipment: Compressor

Furnishings:

Notes:

ROOM OR SPACE

Room No: SKA-26F
Description: **Oxygen Storage**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 32
Square feet

Functional Description: 1 Storage for oxygen cylinders

Qualitative Description: 1 Clean
2 Secure

Locational Criteria: 1 Adjacent to apparatus bays

Technical Criteria:

Walls: CMU or high impact GWB - 2 hour rated
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: 2 hour rated GWB
Windows: Not required
Plumbing: NA
HVAC: Standard
Ventilation: Standard
Lighting: Direct
Power: Standard; rated for O2 storage
Tel/Data: Required
Security: Secured area
Equipment:

Furnishings: 1 (X) M cylinders
2 Cart for (X) D cylinders

Notes:

ROOM OR SPACE

Room No: SKA-27F
Description: **Haz Mat Supply Storage**
Name:
Group: Operation - Fire

Quantitative Criteria: 1 140
Square feet

Functional Description: 1 Storage of haz mat clean up supplies

Qualitative Description: 1 Storage

Locational Criteria: 1 Adjacent to vehicle bays
2 Active materials on trailers?

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Not required
Plumbing: NA
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct
Power: Standard environment
Tel/Data: Required
Security: Standard storage lock
Equipment: NA

Furnishings: 1 24" and 18" Heavy Duty Shelving
2 Allow room for bulk floor storage

Notes: Double doors

ROOM OR SPACE

Room No: SKA-28F
Description: **Medical Supply Storage**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 150
Square feet

Functional Description: 1 Secure medical supplies

Qualitative Description: 1 Secured closet

Locational Criteria: 1 Central to apparatus bays

Technical Criteria:

Walls: GWB
Floors: Resilient
Ceiling: Acoustic Tile
Windows: None
Plumbing: NA
HVAC: Standard environment
Ventilation: Standard environment
Lighting: Direct
Power: None
Tel/Data: None
Security: Standard storage lock
Equipment: None

Furnishings: 1 18" deep shelving on standards
2 Storage cabinets

Notes: Allow adequate floor space for backboard storage

ROOM OR SPACE

Room No: SKA-29F
Description: **Bulk Storage**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 216
Square feet

Functional Description: 1 Storage of equipment and supplies
2 Storage of tires and pumps
3 Storage of surplus turnout gear

Qualitative Description: 1 Locked Storage

Locational Criteria: 1 Adjacent to apparatus

Technical Criteria:

Walls: CMU or high impact GWB
Floors: Epoxy resinous or concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Not required
Plumbing: NA
HVAC: Standard storage environment
Ventilation: Standard storage environment
Lighting: Direct
Power: Standard storage environment
Tel/Data: Required
Security: Standard storage lock
Equipment: NA

Furnishings: 1 Light Duty Shelving
2 24" Heavy Duty Shelving
3 Double door supply cabinets
4 Locked supply cabinets for PPE equipment and accessories

Notes: Allow adequate floor space for 4-5 tires, pumps, etc. under shelving

ROOM OR SPACE

Room No: SKA-30F
Description: **Hose / Training Tower**
Name:
Group: Operations - Fire

Quantitative Criteria: 1 144
Square feet

Functional Description: 1 Stairs for practicing hose advancement; rapelling off buildings
2 Hose drying area from hanging racks

Qualitative Description: 1 Hose hanging space

Locational Criteria: 1 Adjacent to apparatus bays

Technical Criteria:

Walls: CMU with epoxy paint
Floors: Epoxy Resinous or Concrete with hardener or sealer
Ceiling: Exposed to structure
Windows: Required
Plumbing: Floor drain
HVAC: Standard; provide adequate ventilation for venting smoke machine
Ventilation: Standard
Lighting: Direct
Power: Standard
Tel/Data: NA
Security: Locked
Equipment: Operable racks for lifting hoses, training equipment, stairs and ladders, dry stand pipe hook-up, rapelling connections, roof hatch, floor hatch, operable windows/doors at multiple levels, smoke machine

Furnishings: 1

Notes:

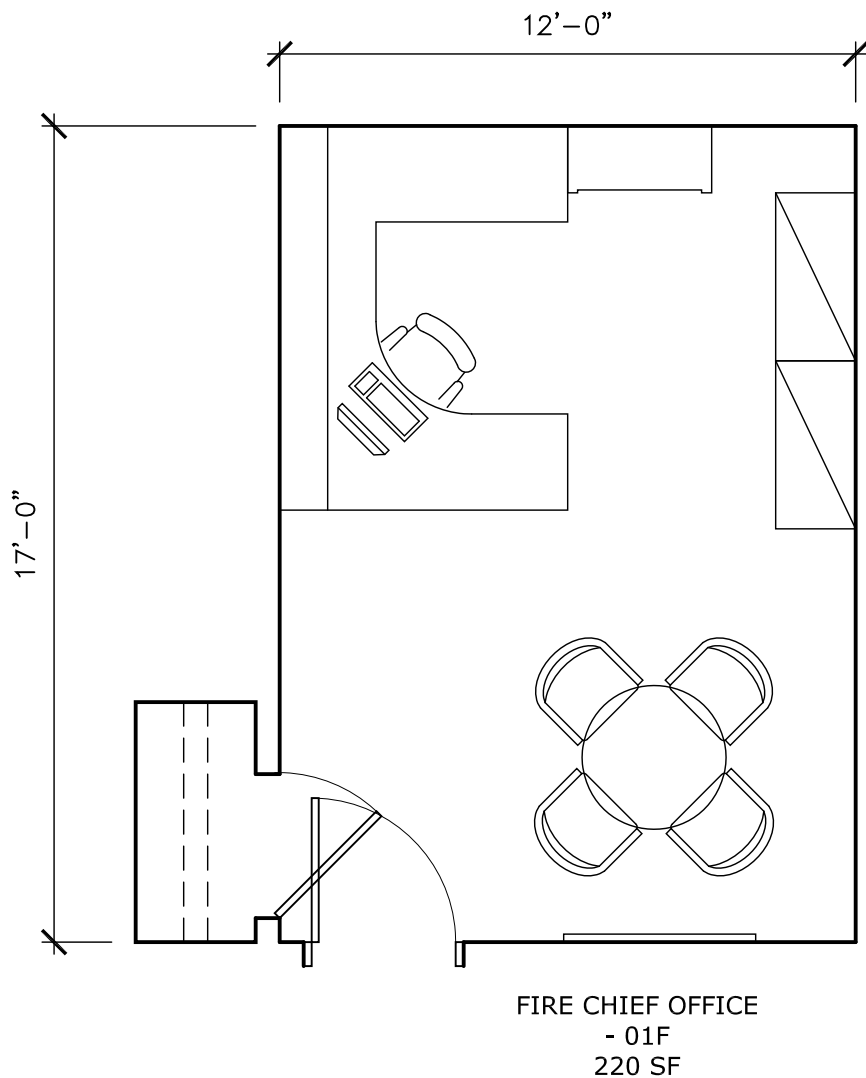


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SKA-1F



PLAN FIRE CHIEF OFFICE
1/4" = 1'-0"

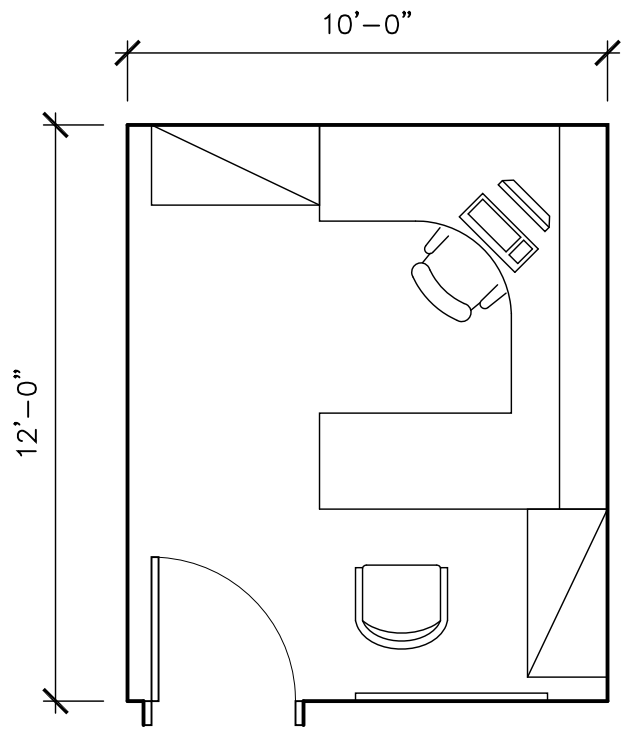


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SKA-2F



ADMINISTRATIVE ASSISTANT - 02F
120 SF

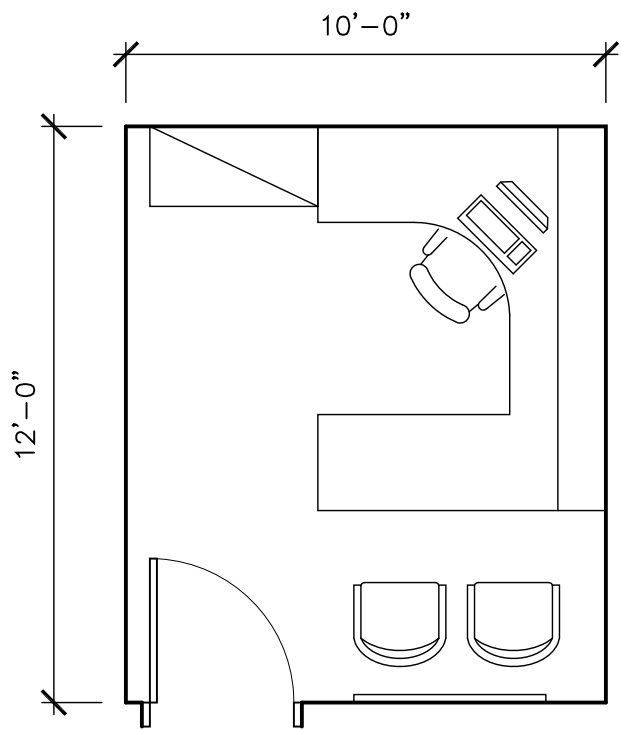


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SKA-3F



DEPUTY FIRE CHIEF - 03F
120 SF

PLAN DEPUTY FIRE CHIEF
1/4" = 1'-0"

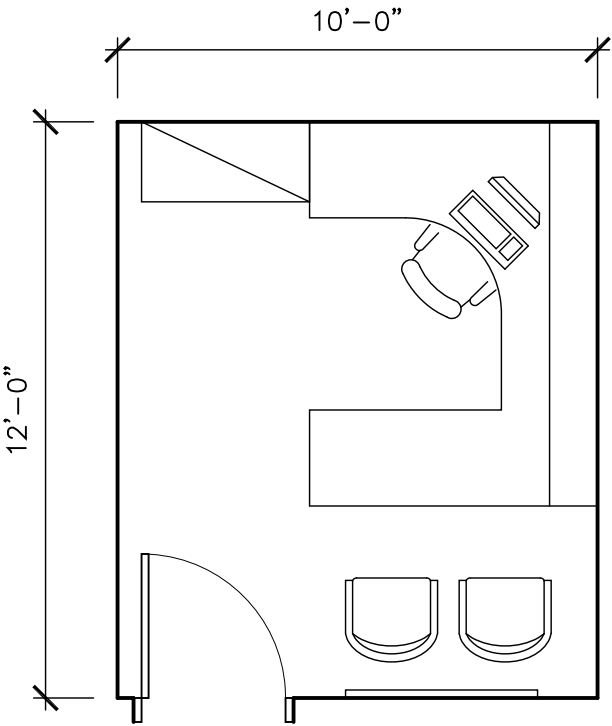


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SKA-4F



CAPTAIN - 04F
120 SF



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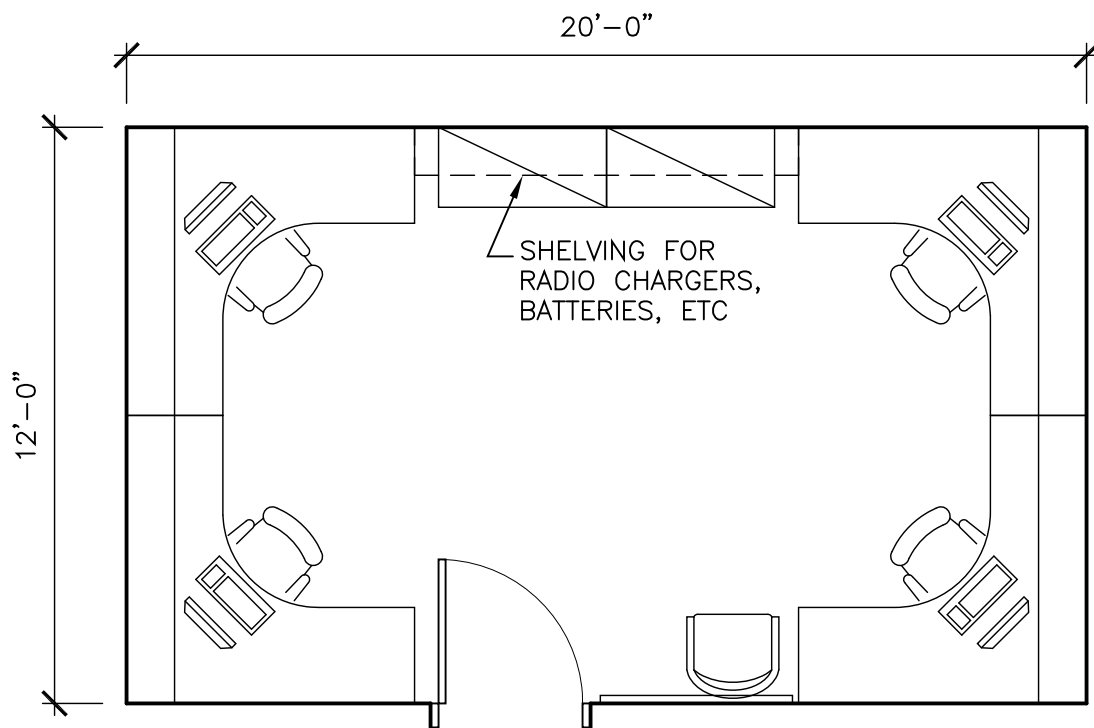
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SKA-5F



SHARED OFFICE - 05F
240 SF

PLAN SHARED OFFICE
 $1/4" = 1'-0"$

1

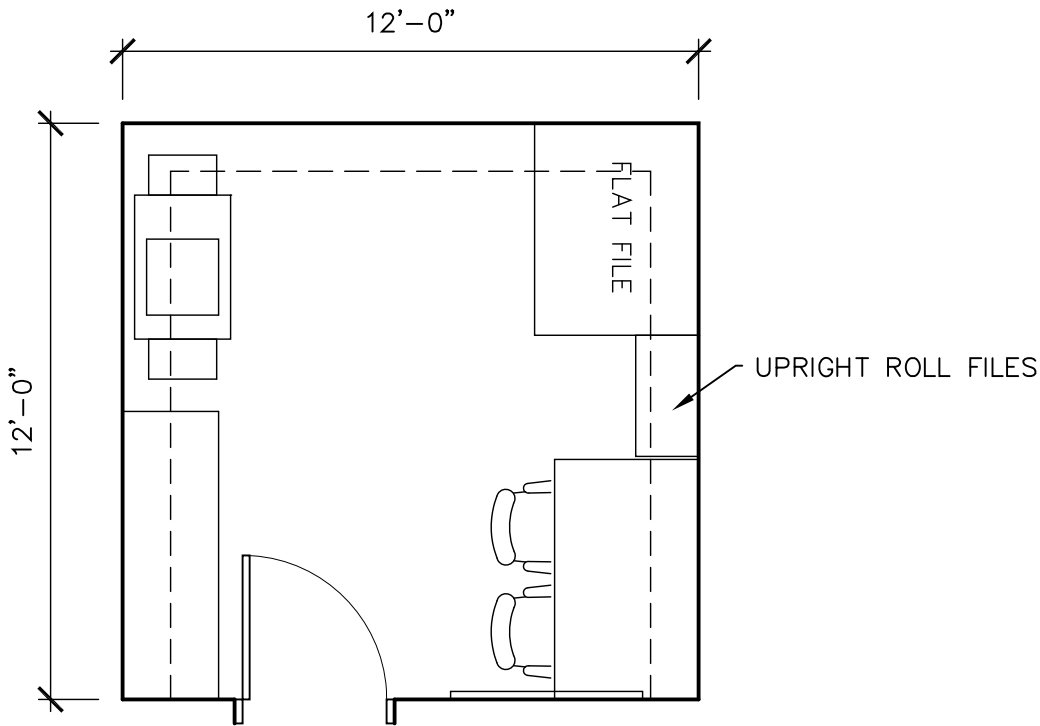


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SKA-6F



PLAN REVIEW / OFFICE EQUIPMENT /
SUPPLIES - 06F
144 SF

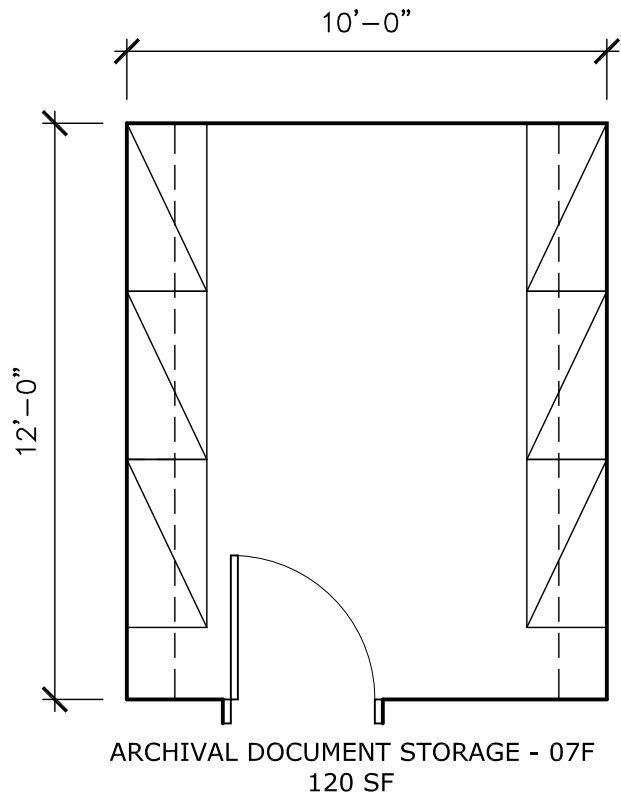


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SKA-7F



PLAN ARCHIVAL DOCUMENT STORAGE
 $1/4" = 1'-0"$

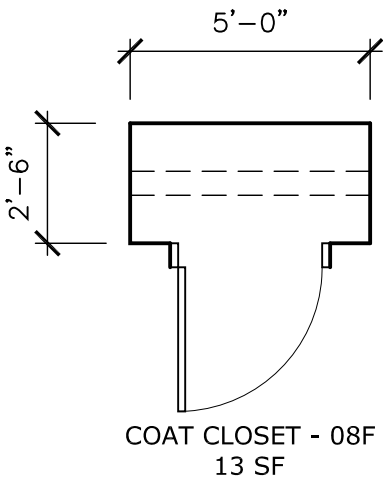


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SKA-8F



PLAN COAT CLOSET
1/4" = 1'-0"

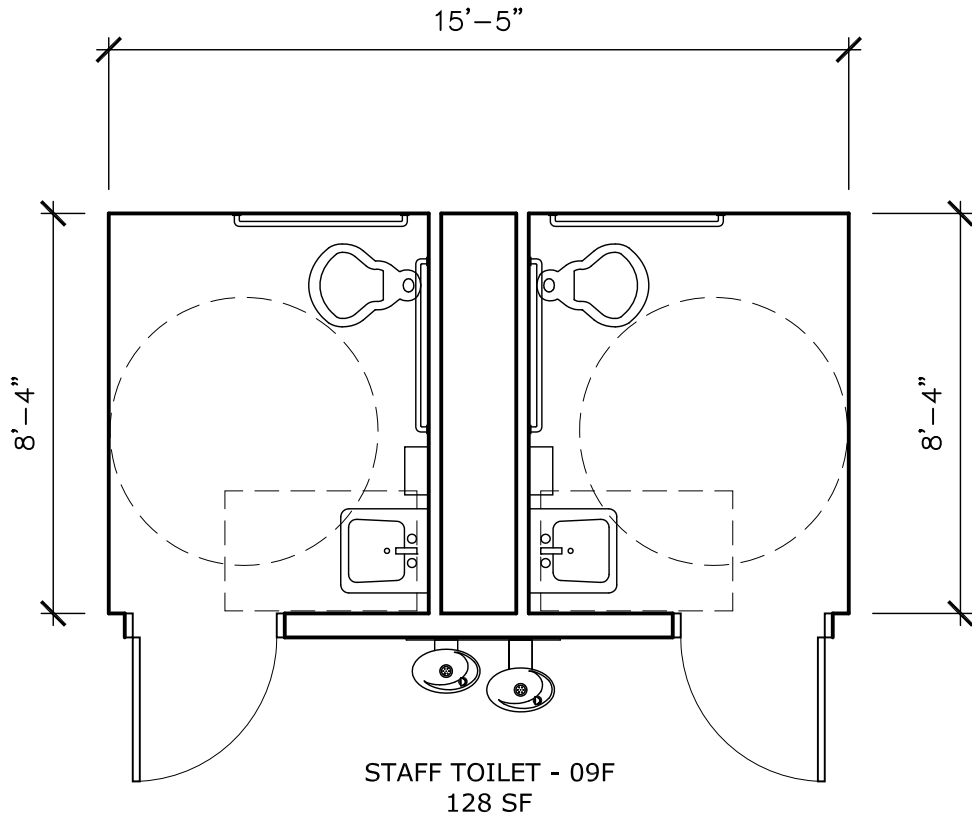


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SKA-9F



PLAN STAFF TOILET
1/4" = 1'-0"

1

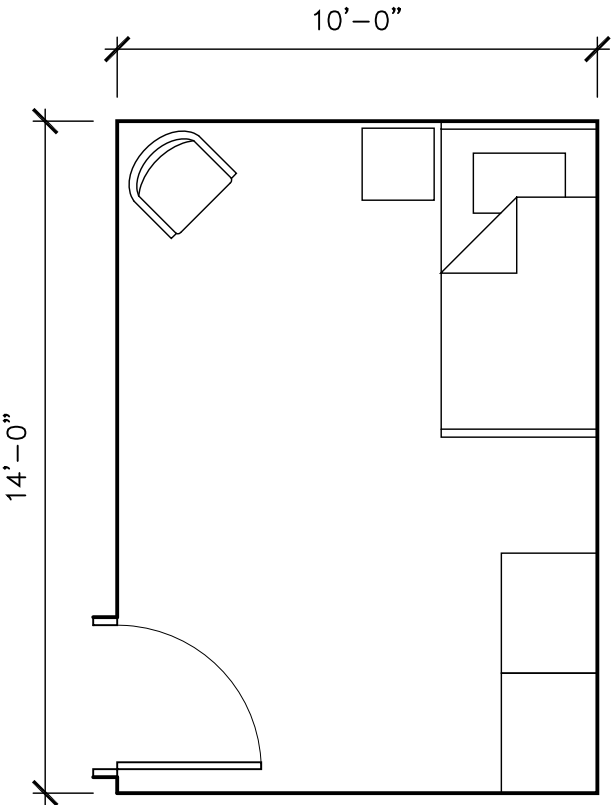


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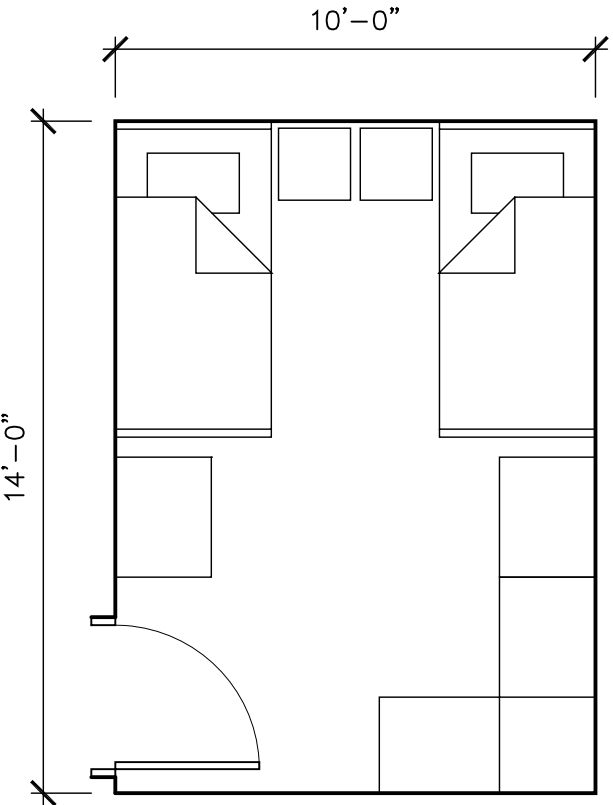
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SKA-10F



DORM ROOM - 10F
140 SF



DORM ROOM - 10F
140 SF

PLAN DORM ROOM
1/4" = 1'-0"

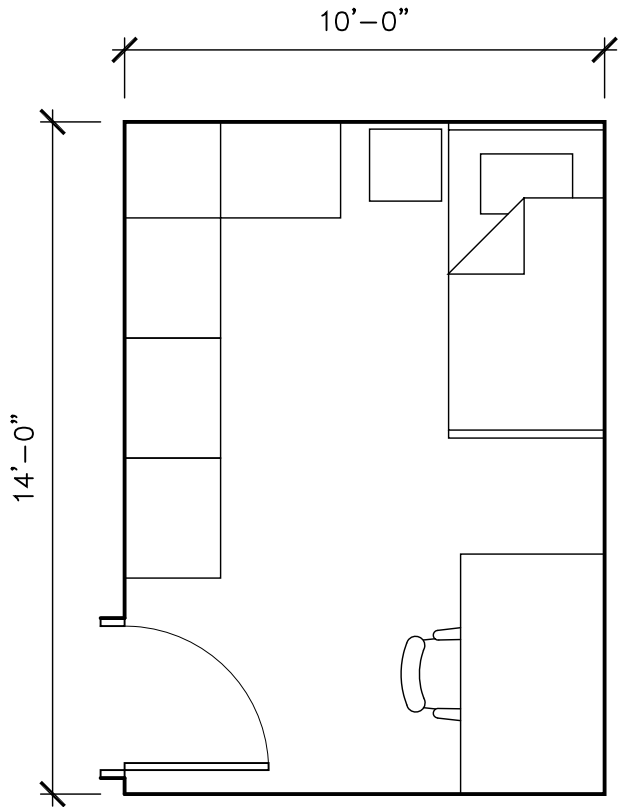


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SKA-11F



LT'S DORM ROOM - 11F
140 SF

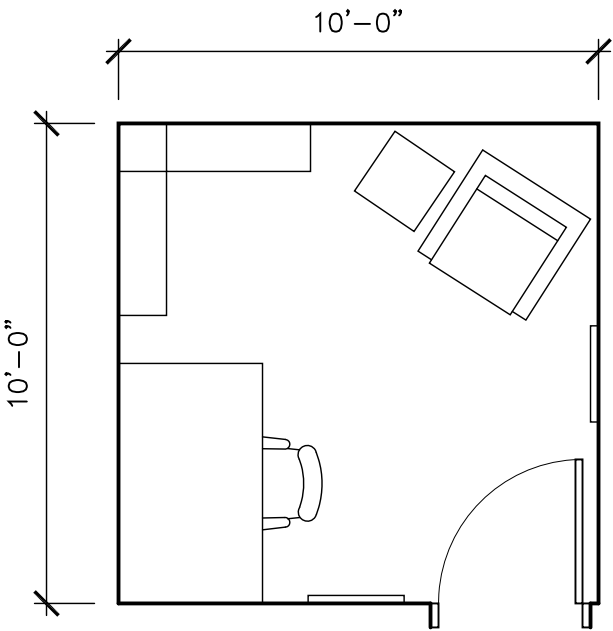


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SKA-12F



STUDY ROOM - 12F
100 SF

PLAN STUDY ROOM
1/4" = 1'-0"

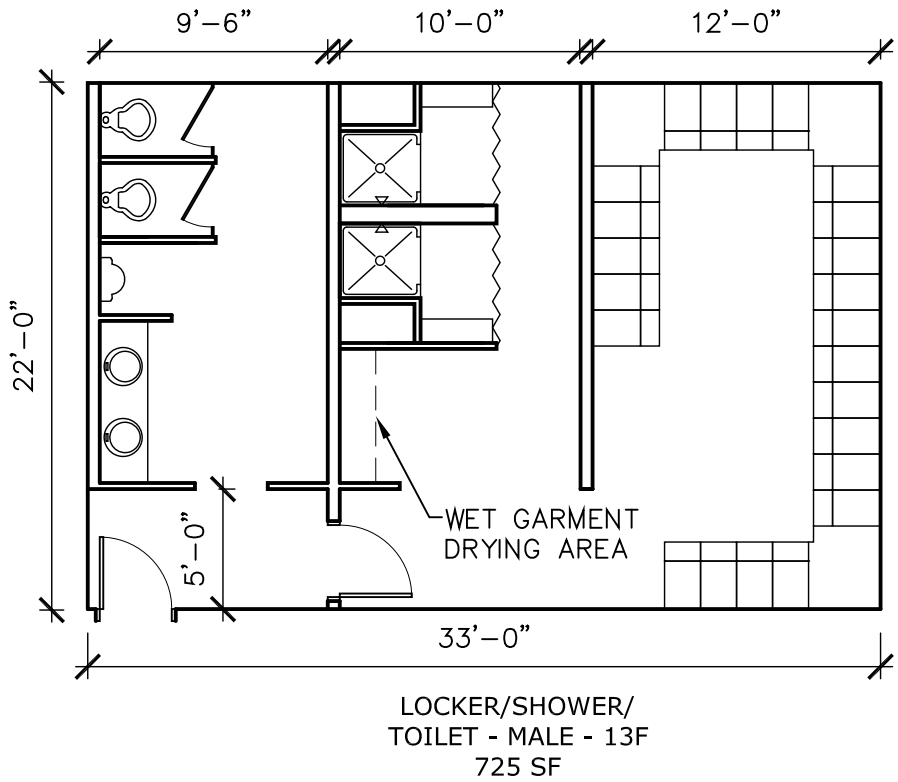


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SKA-13F



PLAN LOCKER / SHOWER / TOILET - MALE
1/8" = 1'-0"



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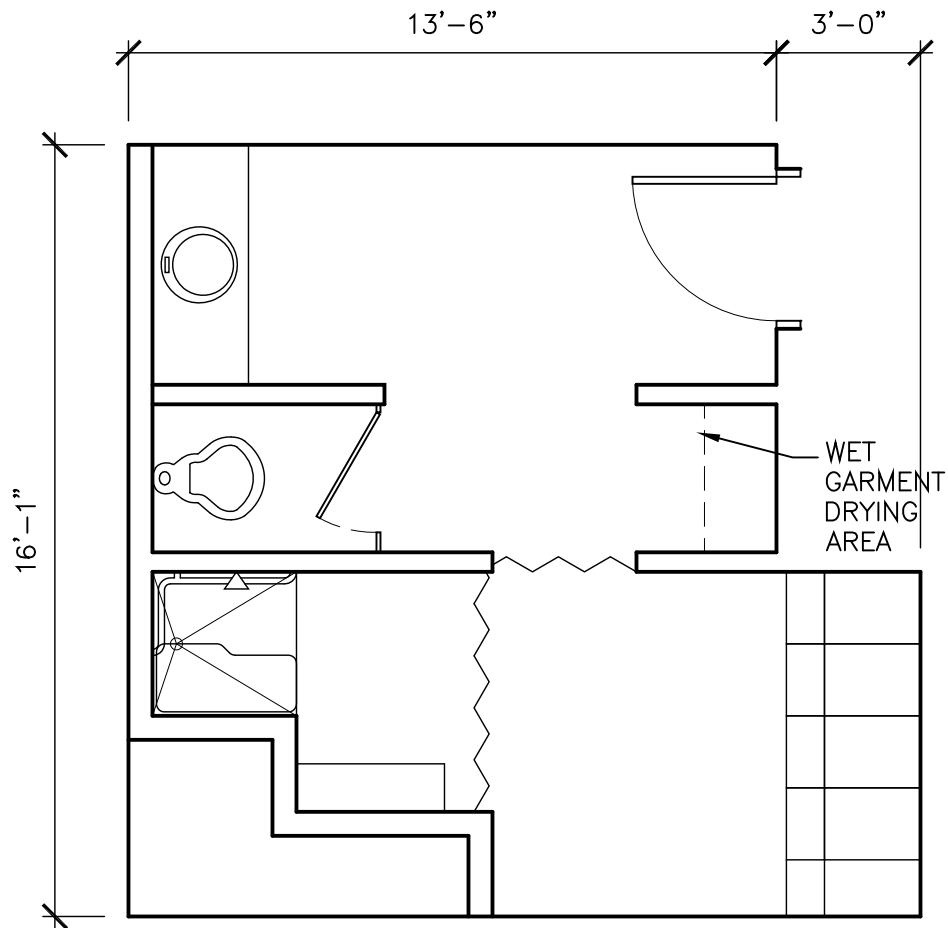
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SKA-14F



LOCKER/SHOWER/ TOILET - FEMALE - 14F
239 SF

PLAN LOCKER / SHOWER / TOILET - FEMALE
1/4" = 1'-0"

1

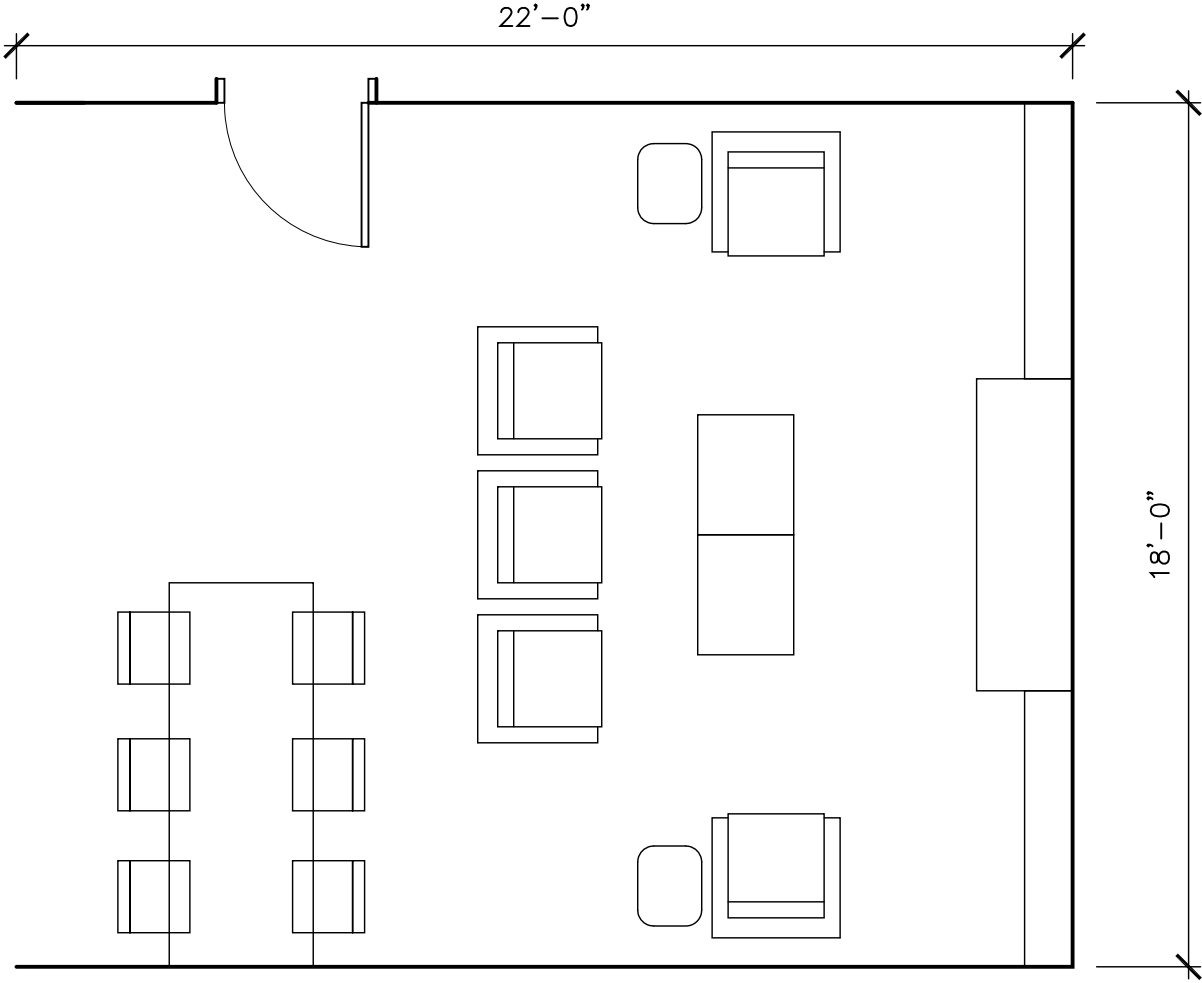


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SKA-15F



DAY ROOM - 15F
396 SF

PLAN DAY ROOM
1/4" = 1'-0"

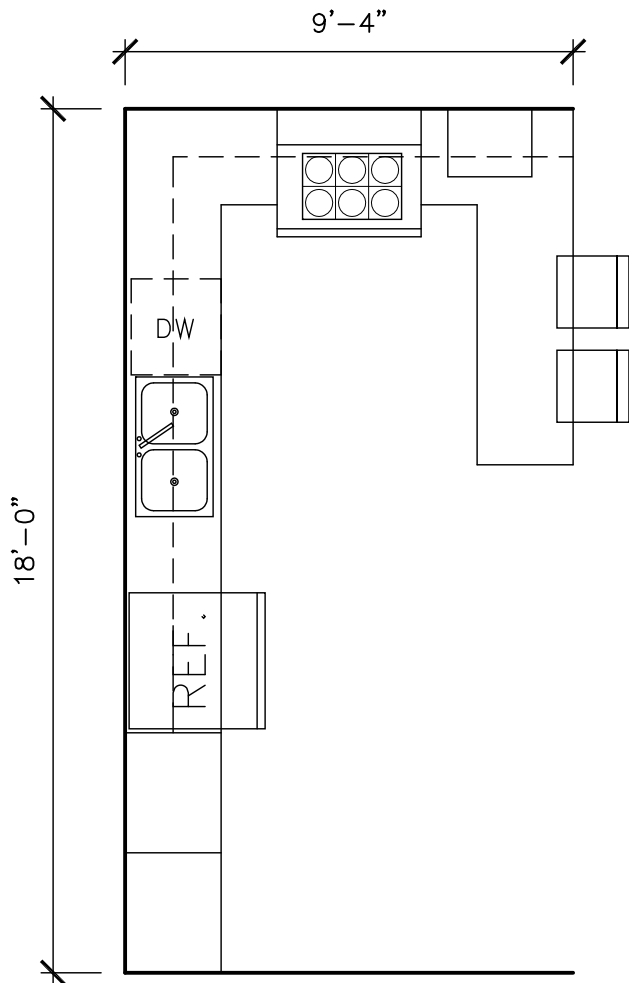


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SKA-16F



KITCHEN - 16F
168 SF

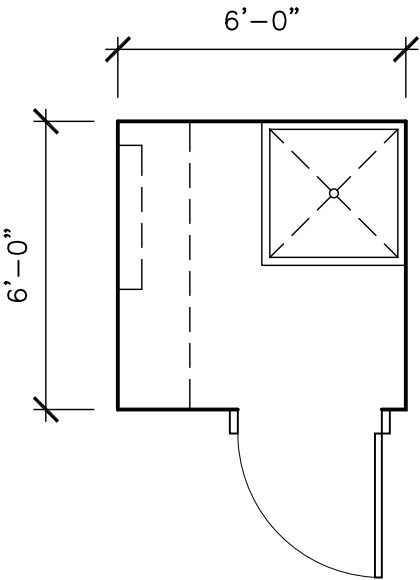


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SKA-17F



JANITOR'S
CLOSET
- 17F
36 SF

PLAN JANITOR'S CLOSET
1/4" = 1'-0"

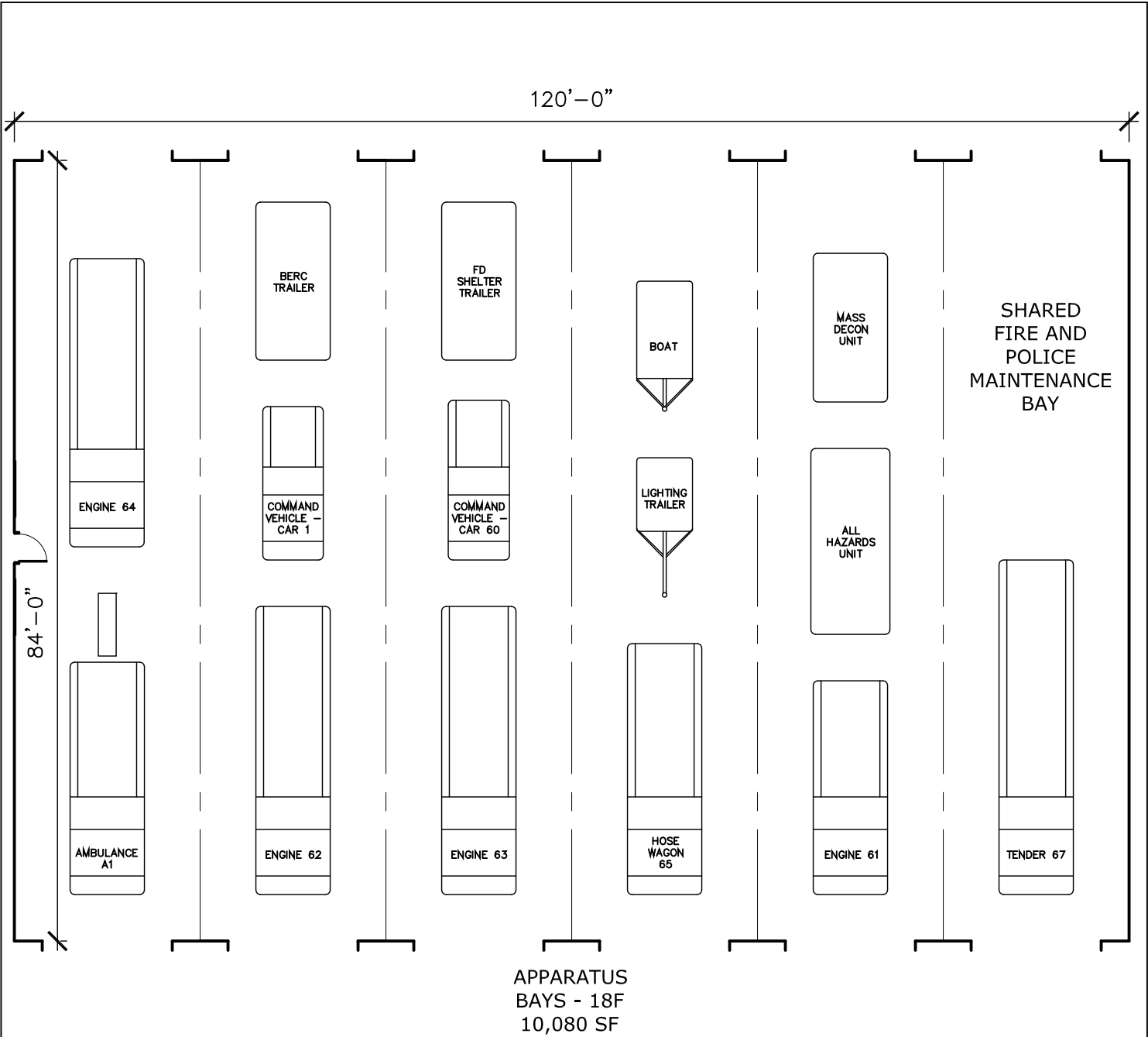


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SKA-18F



PLAN APPARATUS BAYS
1/16" = 1'-0"



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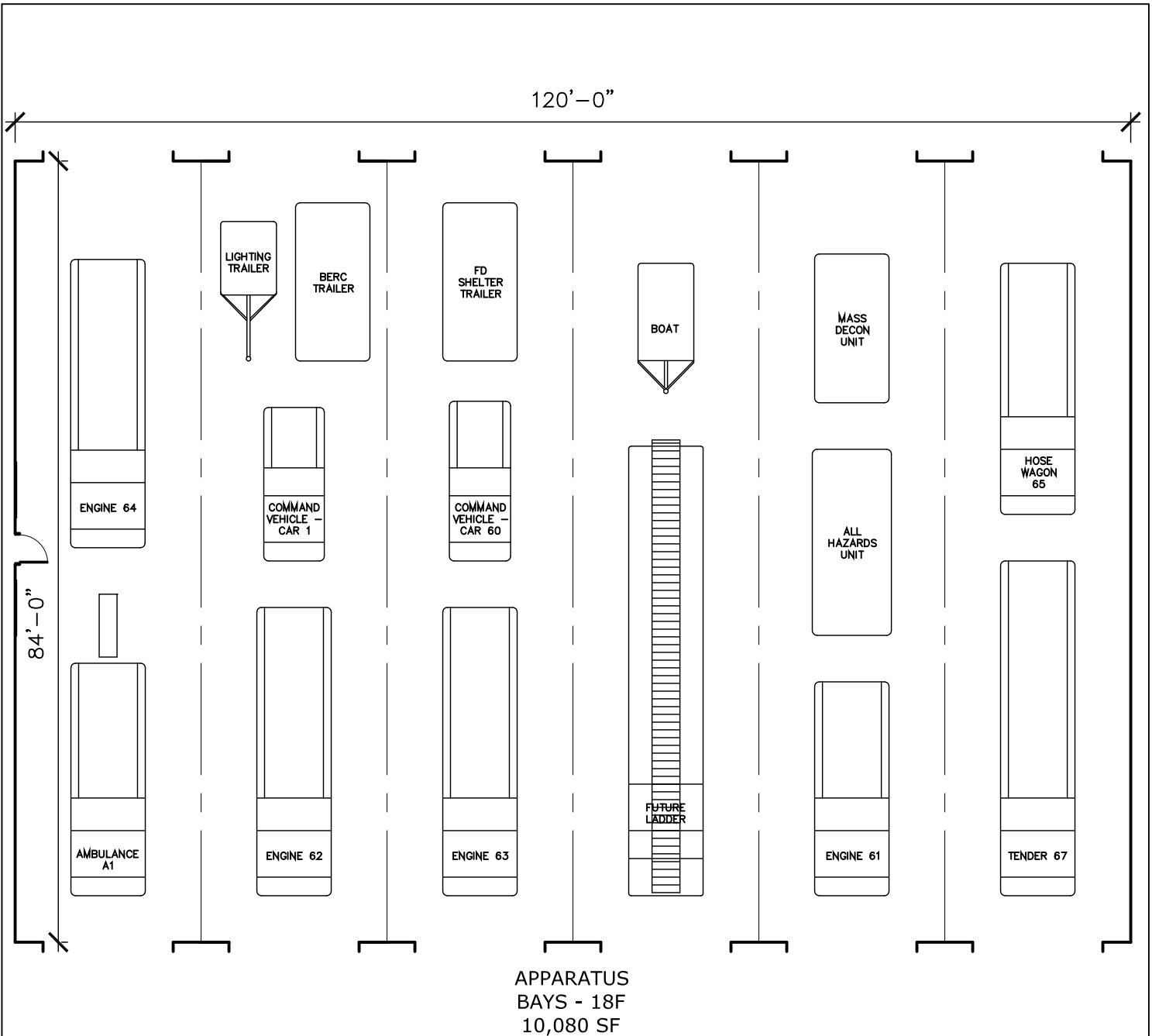
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SKA-18F



PLAN APPARATUS BAYS - FUTURE WITH LADDER TRUCK

1/16" = 1'-0"

1

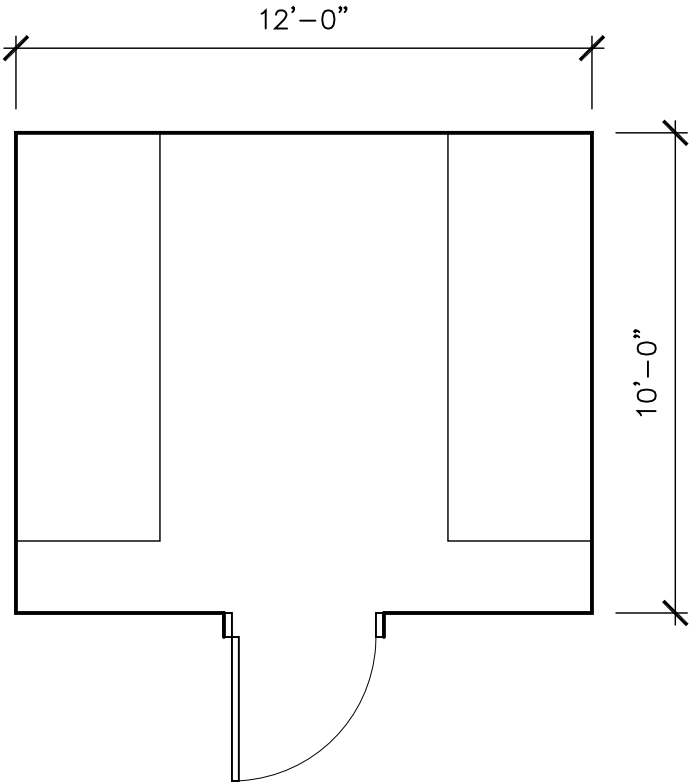


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SKA-19F



HOSE STORAGE - 19F
120 SF

PLAN HOSE STORAGE
1/4" = 1'-0"

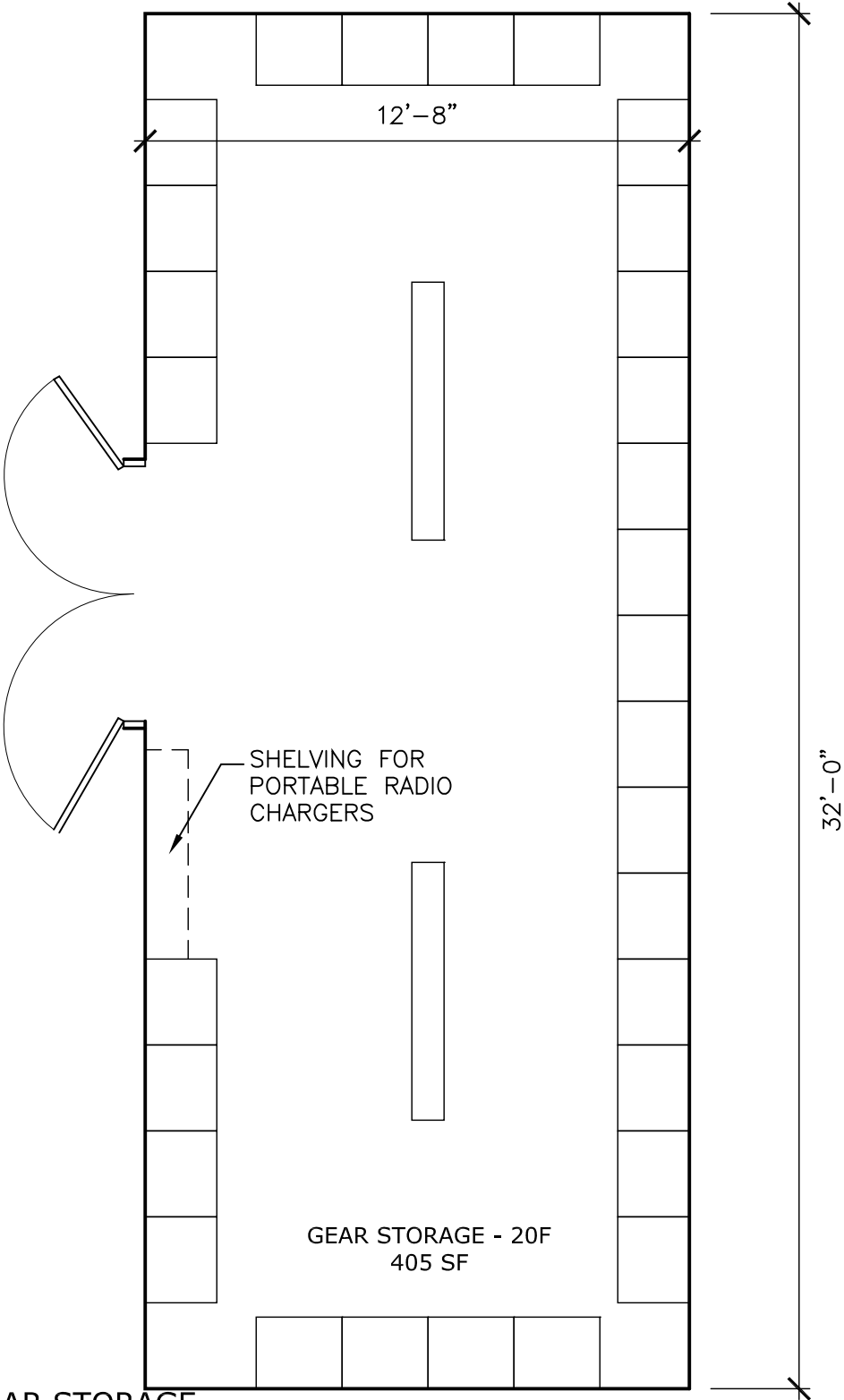


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SKA-20F



PLAN GEAR STORAGE
1/4" = 1'-0"

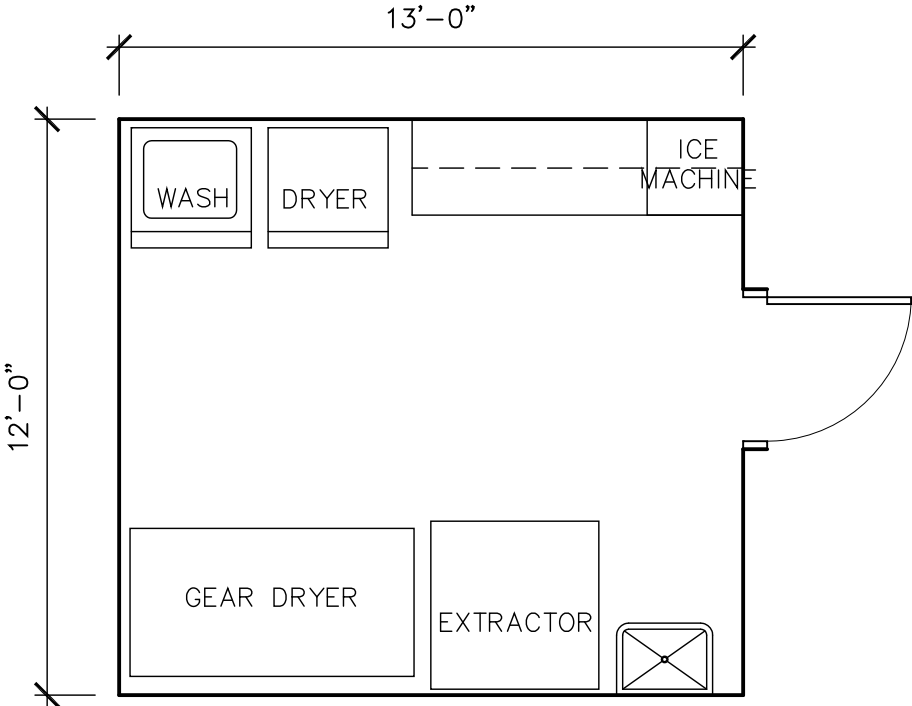


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SKA-21F



LAUNDRY - 21F
156 SF

PLAN LAUNDRY
1/4" = 1'-0"

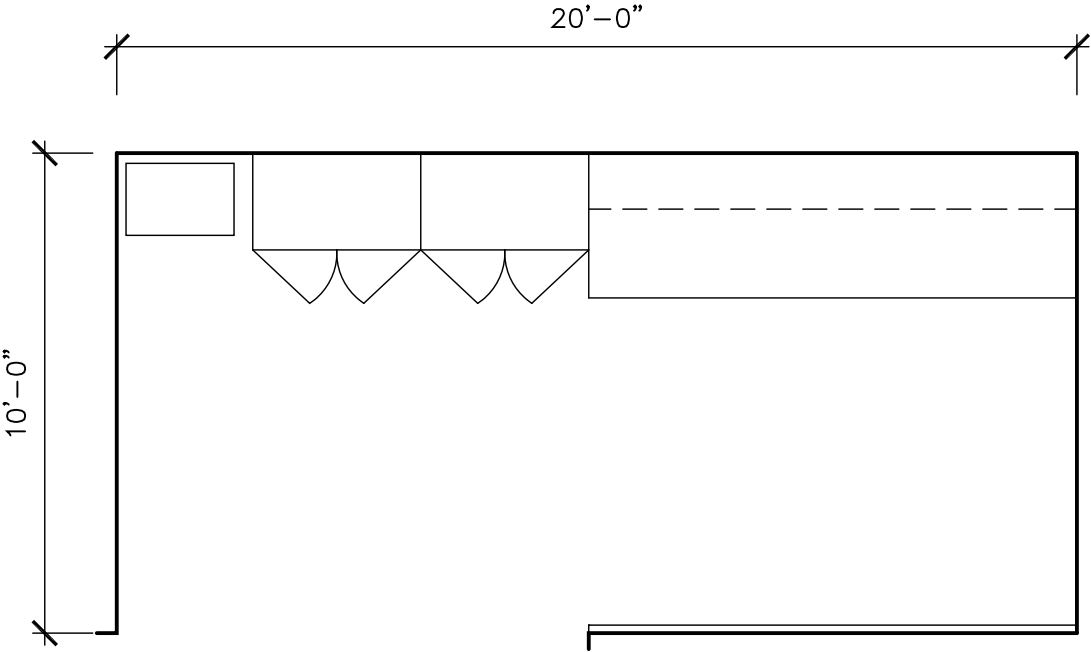


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SKA-22F



MAINTENANCE WORKSHOP - 22F
200 SF

PLAN MAINTENANCE WORKSHOP
1/4" = 1'-0"

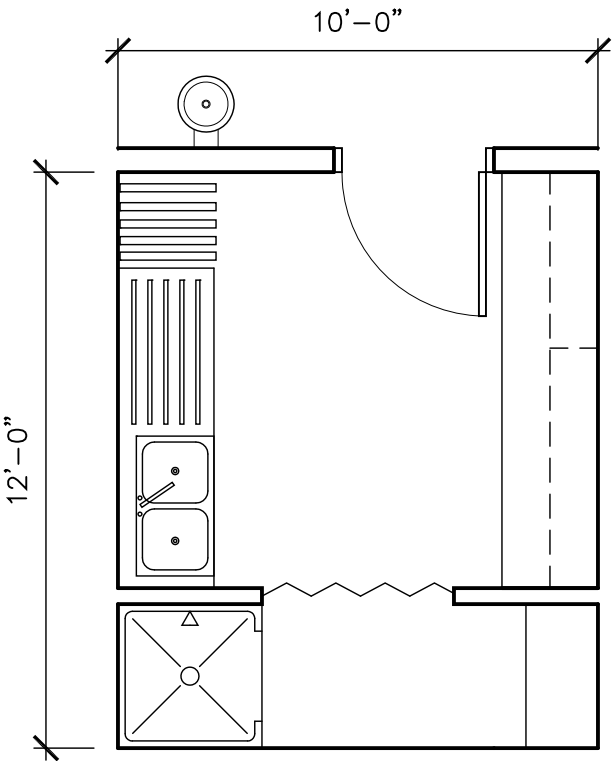


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SKA-23F



MEDICAL CLEANING/DECONTAMINATION - 23F
120 sf

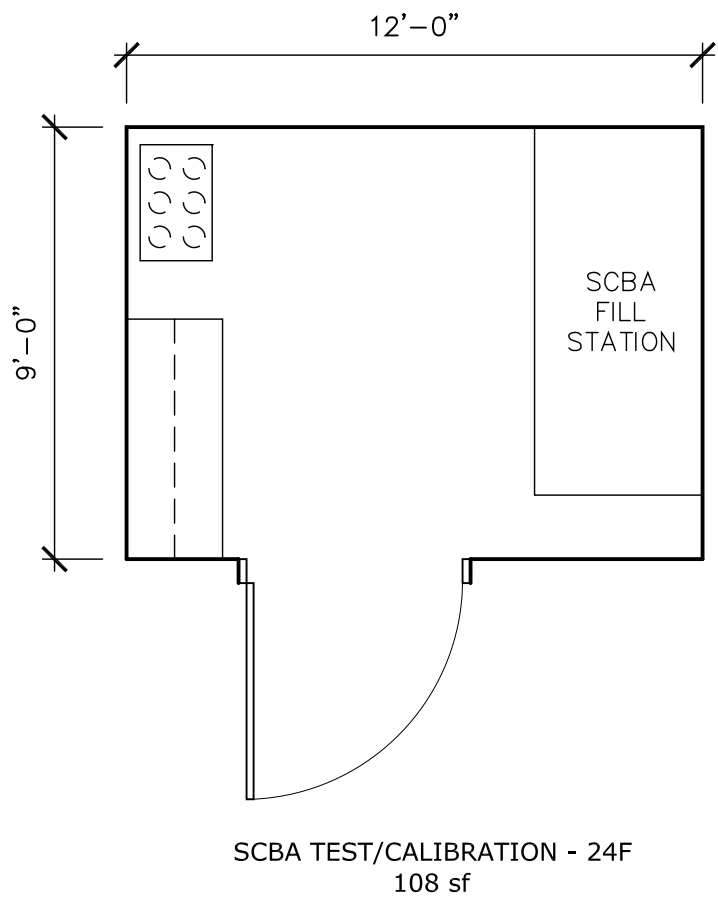


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**BOXBOROUGH PUBLIC SAFETY
FACILITY**
BOXBOROUGH, MA

Date: JAN 15, 2014
Scale: AS NOTED
Job num: 21411
Drawn by: AJD

SKA-24F



PLAN SCBA TEST / CALIBRATION
1/4" = 1'-0"

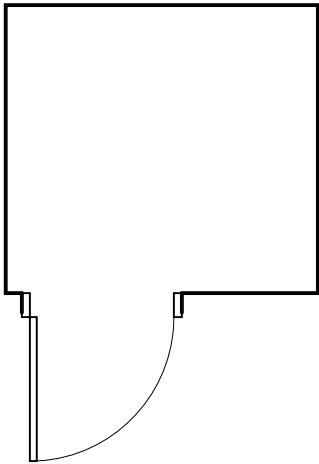


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SKA-25F



AIR COMPRESSOR - 25F
40 SF

PLAN AIR COMPRESSOR
1/4" = 1'-0"

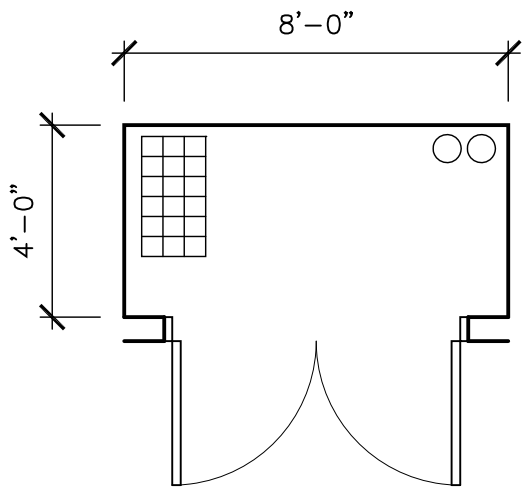


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SKA-26F



OXYGEN STORAGE - 26F
32 sf

PLAN OXYGEN STORAGE
1/4" = 1'-0"

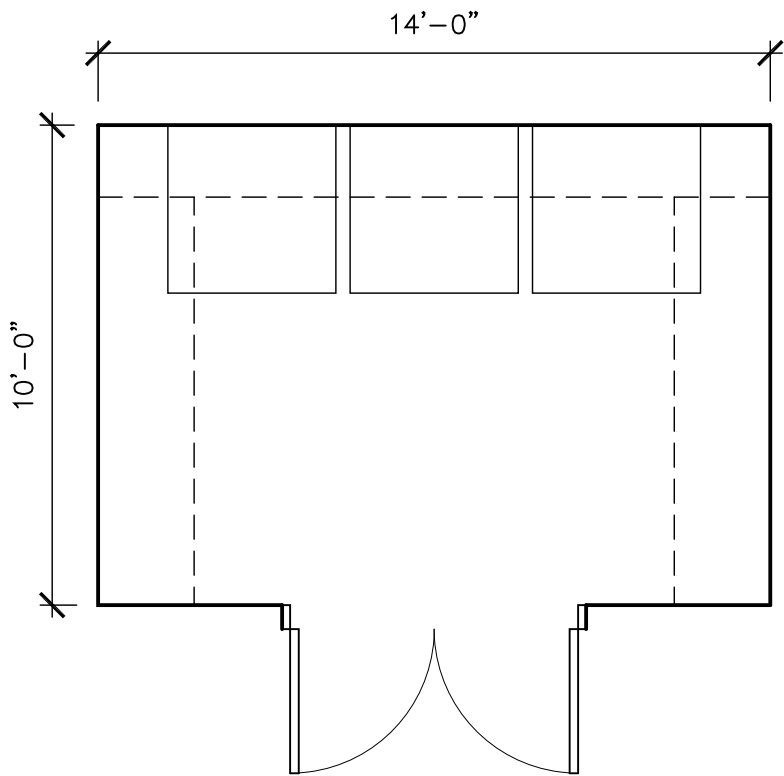


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SKA-27F



HAZ MAT SUPPLY STORAGE - 27F
140 SF

PLAN HAZ MAT SUPPLY STORAGE
1/4" = 1'-0"

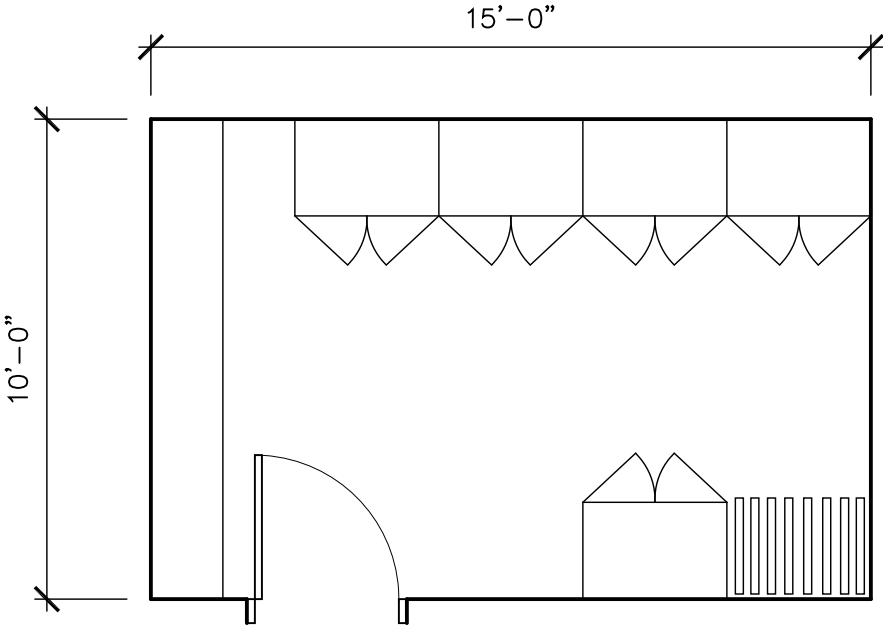


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SKA-28F



MEDICAL SUPPLY STORAGE - 28F
150 SF

PLAN MEDICAL SUPPLY STORAGE
1/4" = 1'-0"

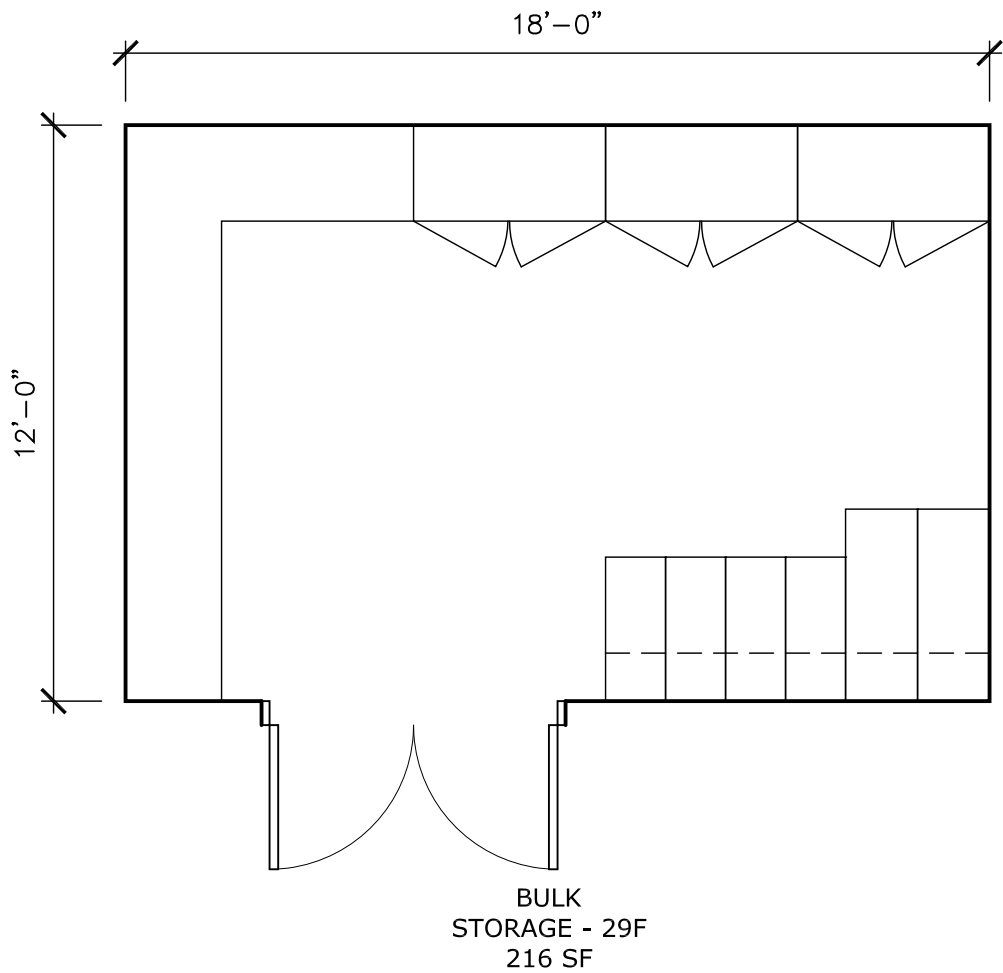


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SKA-29F



PLAN BULK STORAGE
1/4" = 1'-0"

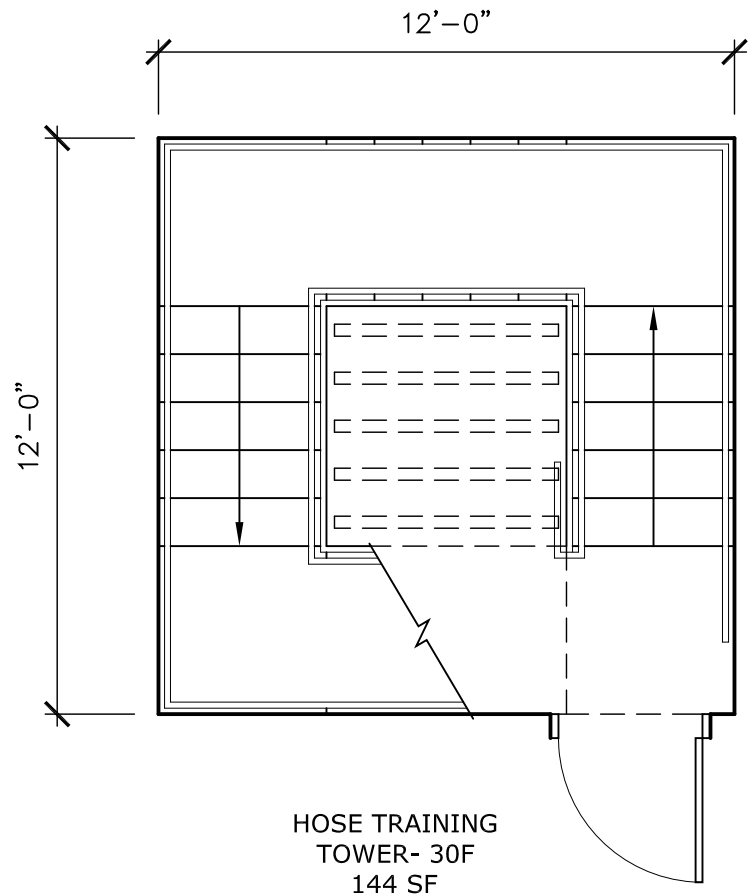


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SKA-30F



PLAN HOSE TRAINING TOWER

1/4" = 1'-0"

1

