



AIR COMBAT COMMAND
AND
AIR MOBILITY COMMAND

FIRE STATION FACILITIES
DESIGN GUIDE





We are dedicated to providing our firefighters first rate fire stations. Those stations serve a dual purpose. First, they are emergency response facilities for firefighters who protect our people, aircraft, facilities, and equipment 24 hours a day, 365 days a year. Just as important, the fire stations are "home away from home" for our firefighters, who stand ready to respond to a wide variety of emergencies during many hours on duty.

We ask a lot of our firefighters—men and women who daily prove their readiness to risk it all for us. In return, we will ensure they have a quality environment in which to work and live—that's what this guide is all about.

Our command standards are spelled out in this Fire Station Facilities Design Guide. It will be crucial to your success in improving mission capability and quality of life for our firefighters.

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Chapter 1

Introduction

A. Purpose

This design guide provides the basic criteria to evaluate, plan, program and design standardized Air Force fire station facilities for the Air Combat Command (ACC) and the Air Mobility Command (AMC). This information is intended to make wing commanders, base civil engineers, fire chiefs, and designers aware of the facilities' unique functional design requirements, and to provide a basis for developing individual large and small fire station projects.

The upgrade and renovation of existing fire stations, and the proper planning, programming, and design of new facilities, will ensure the safety of all personnel, and support our mission—Global Power and Reach for America.

B. Design Guide Scope and Use

This design guide applies to existing and future fire stations in the continental United States. Criteria for determining project requirements, site evaluation and planning, and overall facility design should be used in addition to other Air Force and Department of Defense (DoD) documents. It is intended to supplement existing informational resources needed to identify project requirements and successfully prepare project designs. Further information on individual projects and design requirements must be obtained at the installation level.

1. Project Initiation

The information required to prepare a DD Form 1391, which initiates project development, is found in Chapter 2. This includes consideration of the space criteria, overall building size, site evaluation, and special factors to be included in the cost estimates.

When initiating a fire station renovation project, consider the building's structural stability, age, and space availability to accommodate all fire protection functions. The location of existing stations and the ability of fire fighting vehicles to meet required

response times to the runways and overruns may dictate the need for a new fire station at a better location.

2. Site Selection

Site selection is generally part of the master planning process and is completed prior to preparing a DD Form 1391 for an individual project. However, site selection decisions are often reviewed and sometimes revised based on the specific project developed in the 1391 phase. Guidance for this review is provided in Chapter 2, Section C, Site Evaluation Criteria.

3. Project Definition

The Requirements and Management Plan (RAMP) defines the program for design of an individual Military Construction (MILCON) project. It includes functional requirements, design criteria, and cost information. The material in this design guide provides the basis for preparing a RAMP, which requires the area programming guidance found in Chapter 2, plus the site design, building design and building systems concepts in Chapter 3. In addition, any unique local requirements concerning the building project, design criteria, architectural compatibility and technical systems should be included in the RAMP.

4. Design

Chapters 2 through 5 of the fire station design guide cover all design phases, from space programming to complete design. Space programming is defined in Chapter 2, with design phase guidance specific to Air Force fire stations.

Concept designs should conform to the overall project design considerations covered in Chapter 3, including building organization and circulation criteria. Preliminary and working drawings should reflect the functional area and space criteria outlined in Chapter 4. Through an illustrative design in Chapter 5, an example of a typical fire station building project is featured to help explain programming and design guidance.

Chapter 6 provides the user with recommendations of interior materials, finishes, and colors.

C. Fire Station Overview

The fire stations support the Air Force firefighters' mission to provide fire protection to flight line and facilities on base, and fire prevention education and training.

Space requirements vary for large and small fire stations. The number and types of fire fighting vehicles housed at each station are determined by the type of aircraft they support and the fire flow demand required to extinguish structural fires. These factors also dictate the number of personnel required to operate these vehicles.

All new fire stations should have a conceptual planning study and headquarters civil engineering approval prior to continuing with the project program and design.

Specific functional requirements and design criteria are determined by a variety of governmental entities, along with regional and local standards. Refer to the General References section, pages 62 - 63. ■



To support the firefighters' mission, it is crucial that the design of all fire station facilities accommodate the equipment, the numerous unique functional requirements, and the safety of the fire fighting personnel.

Chapter 2

Program

When planning and programming for fire stations, functions fall into three main categories: maintenance and apparatus, which includes fire protection vehicle storage, maintenance, repair, and supply support; administration and training; and the general residential and "living" areas, which should be separate from business functions.

A. Functions

1. Alarm Communication Center

Area for communications control room, kitchenette, private rest room, emergency response center, and telecommunications/computer room.

2. Apparatus Room

Enclosed area to house fire protection vehicles.

3. Training Facilities

Space for educational training and physical fitness. Office for training, testing room, computer simulator and audiovisual storage.

4. Living Quarters

Includes private bedrooms, personal lockers, physical therapy room, rest rooms/showers, and laundry.

5. Recreation/Dining

Space for television viewing, quiet study, day room, kitchen, kitchen storage, serving line, vending, and dining area.

6. Administration

Entrance/reception area including administration offices, chief's bedroom, rest room, and storage.

7. Maintenance, Repair, Storage and Support

Areas for vehicle maintenance office and vehicle maintenance parts, fire fighting agent storage, hose storage and drying area, fire extinguisher shop, self-contained breathing apparatus shop (SCBA), protective clothing lockers and laundry, and tire storage. Areas also for general storage, medical storage, janitorial areas, mechanical/ electrical/telephone/compressor room, and circulation. Include disinfecting facilities for emergency medical equipment.

8. U.S. Air Force Reserve/Air National Guard

Separate space for chief and assistant chief's offices and protective clothing lockers that are funded by the U.S. Air Force Reserve/Air National Guard (AFRES/ANG).

B. Space Criteria

1. Planning Considerations

Development of space criteria should take into consideration:

- a. Existing fire station facilities on base and their adequacies relative to current and future needs.
- b. The potential for retention and renovation of existing facilities, or for additions or complete new construction projects.
- c. The existing and proposed missions of the base.
- d. Current and projected base population to be served by the proposed facility.

2. Standard Facility Requirements

Follow Air Force regulations for fire station space allowances.

3. Recommended Spaces and Sizes

The recommended functional areas and spaces for different facilities are shown in Tables 5-A and 5-B. Large fire stations, which measure from 20,000 to 30,000 square feet, are designed and constructed as the primary fire station. If a large fire station's location prevents

firefighters from meeting critical response time requirements for crash or structural fires, a small fire station is constructed, measuring from 5,000 to 8,000 square feet.

While many activities take place at the large fire stations, such as fire prevention training and fire extinguisher servicing, the small fire stations serve critical response needs only.

These are approximate space sizes recommended for each facility. The actual space and size may be modified using this criteria as a guide for individual projects.

4. Design Issues and Relationships

In developing the space criteria, consider the issues of overall project design discussed in Chapter 3. General functional relationships between the elements of a fire station include station access and parking.

C. Site Evaluation Criteria

1. Location

Fire stations should be located on the flight line with visual identity and access from a major roadway. The fire station site plan should include provisions for the following:

- a. Access to flight line
- b. Vehicular turning radius
- c. Apparatus driveway
- d. Point of entry - front door

- e. Visitor parking
- f. Personnel parking
- g. Delivery/service entrance
- h. Maintenance/storage area
- i. Expansion
- j. Landscaping
- k. Signage

See Figure 2-A for a large fire station site plan.

2. Site Size

- a. Select a site large enough to provide adequate space for exterior functions and vehicles, taking into account the frontage onto the flight line.
- b. Prepare a preliminary site design to ensure the basic building and site criteria can be accommodated.

3. Access and Visibility

- a. Ensure the fire fighting vehicles' response time to the flight line, runways, and facilities meets the 3-minute time requirement for aircraft emergencies. Bases with dual runways or poorly located large fire stations that cannot respond in time need to pursue the addition of a small fire station to supplement existing emergency response services.
- b. Provide convenient access for both firefighters and the general public.
- c. Choose a site with a prominent and visible location.
- d. The flight line should be visible from the communications control room.

4. Utility Supply Requirements

- a. The fire station should be located near major utilities, including water, sewage, electricity, telephone and gas lines.
- b. See sections on site utilities and building systems design in Chapter 3 for specific service requirements.

5. Site Checklist

- a. Is the facility located outside explosives safety clear zones?
- b. Does the facility site meet clearance requirements and planning criteria for airfield support facilities?
- c. Is the proposed site on designated prime or unique farmlands?
- d. Is the proposed site on designated wetlands or flood plains?
- e. Is project coordination with appropriate state and area-wide clearinghouse/agencies required?
- f. Is the facility site in a compatible land use area?
- g. Does construction require excessive site work?
- h. Are utilities readily available and adequate?
- i. Is project coordination with the regional Federal Aviation Administration required?
- j. Is the project located in a former waste disposal area, landfill site, fuel saturated area, or other site identified in the Installation Restoration Program?

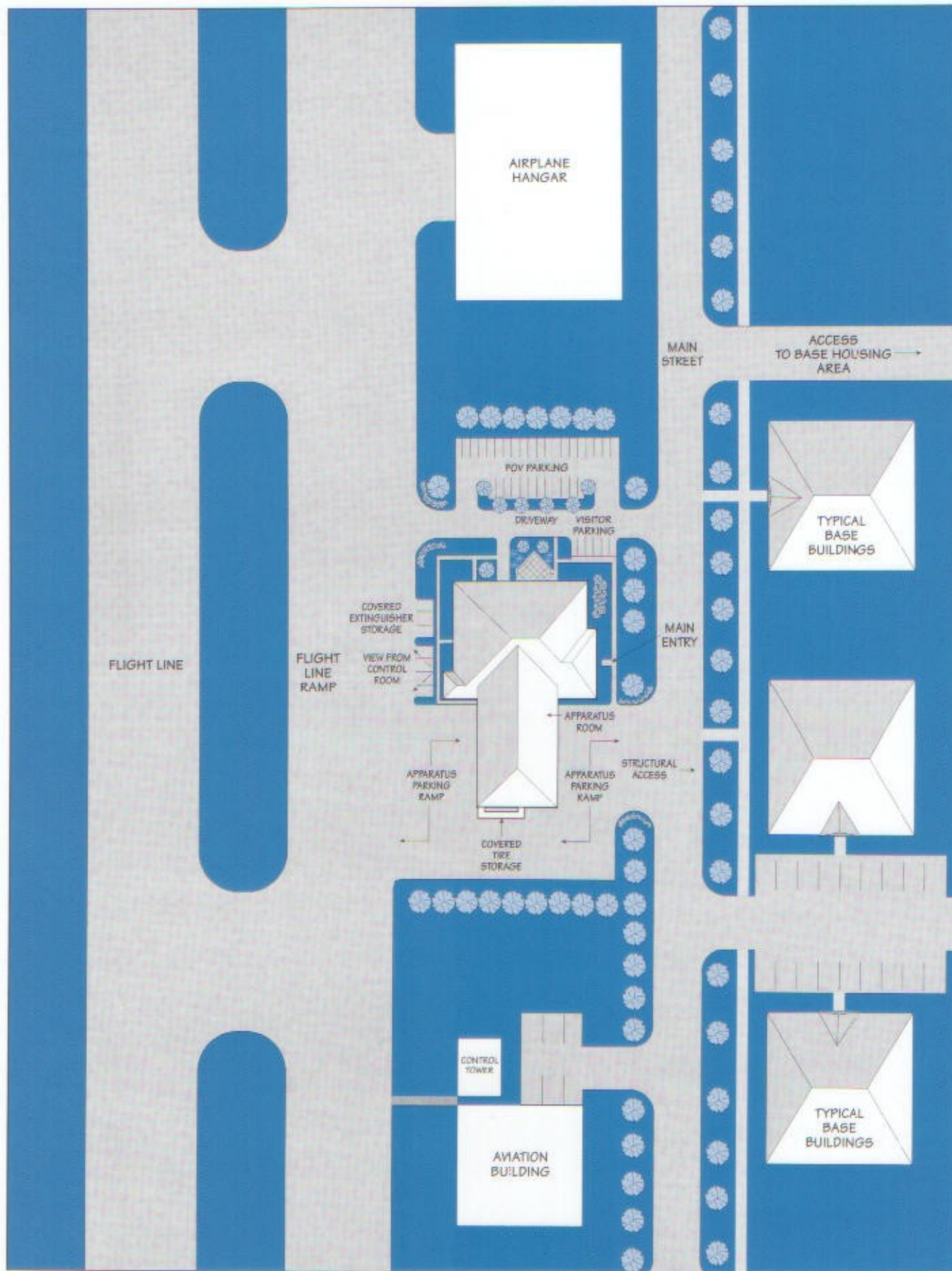


Figure 2-A: Large fire station site plan

D. Special Project Costs

In addition to the usual cost-estimating considerations, the following special factors also should be considered when establishing initial project cost projections. See relevant sections of Chapters 3 and 4 for discussion of specific design requirements for each factor.

- a. Clear span, height, and structural floors in apparatus room.
- b. Kitchen equipment requirements and special construction items such as public address system equipment, sprinkler systems, exhaust extraction systems, and telecommunications equipment.
- c. Numerous plumbing fixtures throughout the facility can result in high plumbing costs.
- d. Noise transfer reduction between major spaces such as sleeping quarters and apparatus room may significantly impact project costs.
- e. The mechanical system has to satisfy particular zone control criteria.
- f. Heavy-duty exterior paving for fire fighting vehicles parking and driveways can create additional costs. ■

Chapter 3

Overall Project Design

A. Site Design

1. Site Selection

This is generally part of the master planning process and is completed prior to DD Form 1391 preparation for an individual project. Refer to Chapter 2, Section C, Site Evaluation Criteria for specific issues regarding fire stations. See Figure 3-A for the large fire station site plan.

2. Site Organization

- a. Locate the facility to comply with standard Air Force and federal directives to ensure fire fighting vehicle response times to aircraft emergencies on the flight line and runways.
- b. Use dominant or attractive natural or built features of the site and its surroundings to help organize the site design. These may include items such as major ground forms, distinct landscapes or patterns of existing structures.
- c. Preserve and take advantage of natural site features such as topography, foliage and rock outcroppings. Use landscape elements to help define the site and main entry, and to present an attractive image for the facility.
- d. Organize the site design to be compatible with the site planning and style of adjacent existing structures.

e. Locate the building to reflect local climatic conditions. For example, provide protection from undesirable winds and glare; expose activity areas to the sun in cold climates; shade from excessive sun in warm climates; and orient operable windows to take advantage of summer breezes.

f. Locate the building to take advantage of passive solar heating and day lighting of administrative and recreation/dining areas.

g. Provide separate roof-covered open parking space with windbreaks adjacent to the apparatus room access pavement for all required vehicles not authorized space in the apparatus room.

3. Access Design

- a. Ensure that dimensions of access roadways and service entrances accommodate vehicle sizes anticipated for fire station operations.
- b. Provide privately owned vehicle (POV) parking spaces based on the total positions assigned, including 8- and 24-hour positions, and all U.S. Air Force Reserve fire department positions.
- c. Provide five additional visitor parking spaces at large fire stations, and two spaces at small fire stations.
- d. Locate parking areas so they do not dominate the main entrance and public image of the facility.

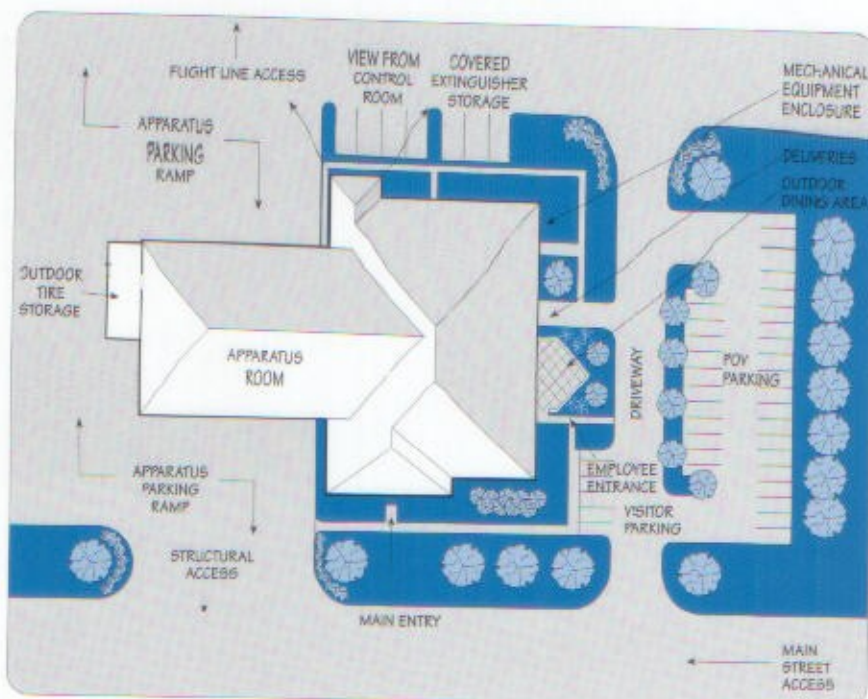


Figure 3-A: Large fire station site plan

e. Apparatus parking ramps should be designed to support the weight of vehicles defined in Table 4-A on page 19.

f. POV parking surfaces should be asphalt or concrete.

4. Site Utilities

a. Provide water, sanitary sewer, storm drainage system, plus natural gas, steam service or fuel oil system, whichever is used.

b. Provide electric, telephone, and fire alarm and sprinkler systems.

5. Landscaping

a. Provide landscaping that is low maintenance using only approved plant material identified in the base's Architectural Compatibility Guide.

b. Landscape design should include a water-conserving underground irrigation system when appropriate to the climate and planting design.

c. Do not use deciduous trees when landscaping because of the proximity to the flight line.

d. Use low-lying bushes or plants on the flight side.

e. Landscape lighting is optional. If used, provide low-voltage lighting on the street side.

B. Building Design

1. Building Organization and Circulation

a. Large Fire Station

- ◆ Alarm communications center
 - Communications control room
 - Kitchenette/private rest room
 - Emergency response center

- Telecommunications/computer room
- ◆ Apparatus room
- ◆ Training facilities
 - Training room
 - Assistant chief for training office
 - Audiovisual storage
 - Fire fighting computer simulation model
 - Testing/training
 - Physical fitness
- ◆ Living quarters
 - Private bedrooms
 - Personal lockers
 - Physical therapy room
 - Rest rooms/showers
 - Laundry
- ◆ Recreation/dining
 - Television room
 - Day room
 - Vending
 - Kitchen
 - Kitchen storage
 - Serving line
 - Dining area
- ◆ Administration
 - Entrance/reception
 - Fire chief's office
 - Fire chief's conference room
 - Fire chief's bedroom
 - Deputy fire chief's office
 - Assistant chief for operations' office
 - Assistant chief for operations' bedroom
 - Rest room
 - Station captain's office/bedroom
 - Assistant chief for technical services' office
 - Technical services staff office
 - Technical services aids and storage
 - Administration storage
- ◆ Maintenance, repair, storage and support

- Vehicle maintenance office
- Vehicle maintenance parts and tools
- Fire fighting agent storage
- Hose storage and drying
- Fire extinguisher maintenance/repair and storage
- SCBA maintenance and repair
- Protective clothing lockers
- Protective clothing laundry
- Outdoor tire storage
- General supply
- Medical storage
- Janitor's closet
- Mechanical/electrical/telephone/compressor room
- Public and private corridors
- Disinfecting facilities

b. Small Fire Station

- ◆ Alarm communications center
 - Communications control room
 - Private rest room
 - Telecommunications/computer room
- ◆ Apparatus room
- ◆ Training facilities
 - Physical fitness
- ◆ Living quarters
 - Private bedrooms
 - Station captain's bedroom
 - Personal lockers
 - Rest rooms/showers
 - Laundry
- ◆ Recreation/dining
 - Television room
 - Day room/training room
 - Vending
 - Kitchen
 - Kitchen storage
 - Serving line
 - Dining area
- ◆ Administration
 - Station captain's office/bedroom
 - Administration storage
- ◆ Maintenance, repair, storage and support

- Fire fighting agent storage
- Hose storage and drying
- Protective clothing lockers
- Protective clothing laundry
- General supply
- Janitor's closet
- Mechanical/electrical/telephone/compressor room
- Public and private corridors

c. AFRES Fire Department

- ◆ Not required in small fire stations if accommodated in large stations.
- ◆ Offices for AFRES chief and assistant chief.
- ◆ Protective clothing locker room.

d. ANG Fire Department

- ◆ Office for ANG chief and assistant chief.
- ◆ Protective clothing locker room.

e. Design the administrative and personnel living areas to reduce noise impact from the apparatus room, vehicle access ramps and the flight line.

f. Include circulation in all the functional areas. Use corridors as required for visual privacy or security.

2. Architectural Character and Interior Design

The architectural and interior design of the fire station must be integrated. Both involve functional analysis and consideration of the appropriate environmental character, building organization and circulation, supervision and flexibility requirements, as well as finishes and furnishings.

a. The design should reflect the regional and local base architectural style or character. Review the base Architectural Compatibility Guide to assure the design complements existing architecture.

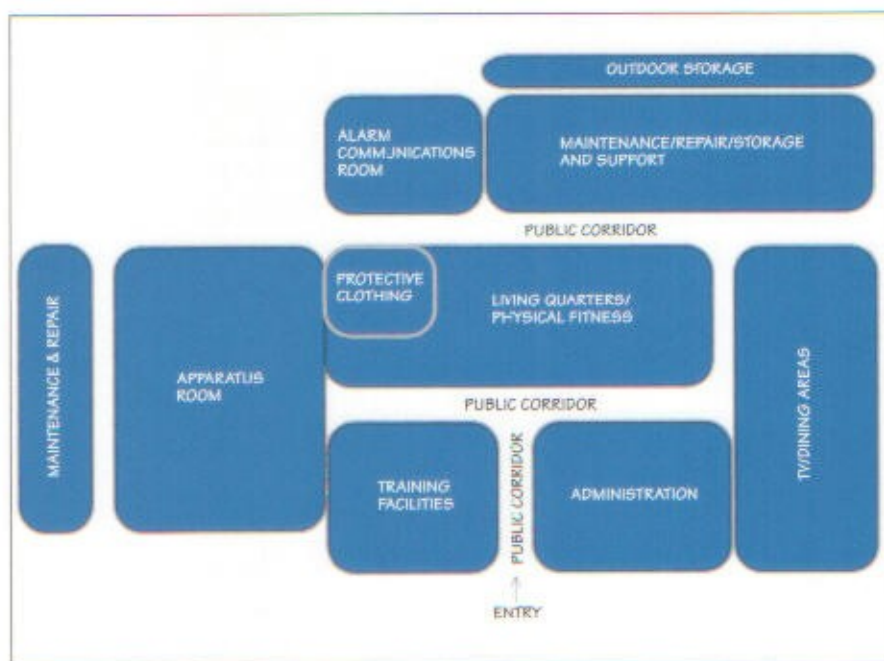


Figure 3-B: Large fire station functional area relationships



Drive-through stalls allow aircraft rescue and fire fighting (ARFF) and structural vehicles to respond to both flight line and structural emergencies.

b. Create a theme that applies continuously to the entire facility design from an overall architectural statement to specific interior design.

c. The fire station should present a cohesive architectural image. Continuity of space should be reinforced by space planning, building form, and development of elevation, materials, and details.

d. Be sensitive to the natural flow of sequenced spaces. Circulation paths should accommodate personnel and equipment.

e. Living quarters should have residential character.

3. Supervision and Security

The security of the fire station after business hours is controlled from the communications control room. The main entrance and apparatus room require monitoring by a security camera. Provide an intrusion detection alarm system.

4. Flexibility and Expansion Potential

a. Design of the fire station should accommodate change and expansion without over-designing the initial project.

b. Apparatus room should be designed to allow for the addition of fire protection vehicle stalls.

c. Training facilities should allow flexible layout of furnishings.

5. Handicapped Access

All functional areas, including parking spaces, entrances, corridors, rest rooms, pay phones, and door hardware, must be barrier-free and

accessible to the physically handicapped in accordance with appropriate accessibility standards.

6. Special Considerations for Renovations

a. All design and building organization and circulation criteria apply to renovation projects, as well as new construction.

b. Renovation areas should be phased, with functions ongoing in the operating fire station.

c. Transform the image of the existing structure, inside and outside, to reinforce its identification as a fire station. This may require substantial facade renovation and interior redesign to achieve the appropriate quality and character.

7. Signage

a. Provide exterior and interior signage in accordance with ACC/AMC standards.

b. Regulation signs should be located where specific warning or prohibitory information is required.

c. Provide clearly identified handicapped access and signage.

8. Telecommunications

For the type and quantity of telecommunications, lines, equipment and computer cabling, contact the base communications squadron.

a. Data

- ◆ Pre-wire for computers and printers. Pre-wire for three workstations in small fire stations.
- ◆ Provide pre-wiring for civil

engineering data automation systems in all offices, training, emergency response rooms, and in the fire extinguisher shop.

- ◆ Provide a system of empty raceways with pull wire, outlets and cabinets for future telephone installations.

b. Telecommunications

- ◆ Provide a telephone equipment room inside the building, separate from the mechanical room.
- ◆ Provide pre-wiring for multiline telephones throughout the station.
- ◆ Provide for equipment capable of receiving telecommunications display devices for hearing impaired calls.
- ◆ Provide for telephones in offices, private rooms, quarters, day room, apparatus, training, emergency response rooms, and fire extinguisher shop.
- ◆ Provide wall-mounted public telephones with acoustical panels near the day room.
- ◆ Pre-wire the communications control room including crash net lines, emergency fire reporting lines, and direct lines for telephones.
- ◆ Provide pre-wiring for the fire crash and inter-base radio systems.
- ◆ Provide built-in or modular cabinets and desks for at least six workstations in the communications control room at large fire stations, and two workstations at small fire stations.
- ◆ Locate the central intercom console in the communications control room.
- ◆ Provide an internal communication system with the following features:

- Hand-free phone
- Two-way intercom throughout the facility capable of addressing all rooms or a single room at one time
- Ceiling-mounted speakers
- Tone alert feature interconnected to the primary crash network
- Telephones capable of accessing public address system
- Two-way intercom between the main entrance and the communications control room

c. Video

- ◆ Pre-wire for cable TV in the day rooms, dining areas, training room, alarm communications room and all sleeping rooms and offices.
- ◆ Provide cabling to training area for Fire and Emergency Television Network (FETN) or equal cable system. Other areas to be cabled as an option.
- ◆ FETN viewed through video cassettes, or direct link with optional satellite located on fire station roof.

C. Building Systems

1. Structural

- a. Select an economical structural system based on facility size, projected load requirements, and local availability of materials and labor. Consideration must also be given to wind, snow, seismic, geologic, frost line, and other site specific conditions.
- b. Select and design the structural system based on analysis of projected future needs. Future expansion requirements should be easily and

economically accommodated. However, do not over-design the initial construction.

c. Design building structural modules to reflect space requirements, economy, and subsystem dimensions (e.g., ceiling grid, masonry units, framing members, etc.).

d. Consider clear-span versus multi-column supported roof structures for apparatus rooms.

2. Heating, Ventilating, and Air Conditioning

a. Provide heating, ventilating, and air conditioning (HVAC) systems.

b. The station should be ventilated to prevent infiltration of fuel vapors and exhaust fumes from the apparatus room and the flight line into the administrative and personnel living spaces. Vehicle exhaust removal may be area specific or source specific.

c. Provide a night setback system for the HVAC system.

d. Provide carbon monoxide alarms and automatic ventilation in apparatus bays.

e. Provide zone controls for maintaining different environmental conditions in all functional areas, and for operating systems in areas of the facility when other areas are closed.

f. Provide tamper-proof temperature sensors with remote adjustment.

g. An active solar space heating system and/or domestic hot water heating system should be considered only if the major command's solar assessment for the particular base results in a savings investment ratio of greater than one.

h. The HVAC system should be designed and constructed for easy maintainability and operation.

3. Energy Monitoring

a. Perform a life-cycle cost analysis of available energy sources in accordance with the appropriate standards. The uniform present worth factor and the fuel escalation rates should be the latest published by Department of Energy. The selected systems' total energy consumption should not exceed the DoD total energy budget figures.

b. Provide for connection to the base energy monitoring and control system.

4. Plumbing

a. Provide domestic hot and cold water, sanitary and storm drainage, plus propane or natural gas systems.

b. Provide hot and cold water bibs for every two vehicle bays.

c. Provide eye wash and shower in the apparatus room, extinguisher shop and vehicle maintenance areas.

d. Provide hot water temperature at 105° F for general use, 140° F to kitchen for normal use, and 180° F for dish washing purposes.

e. Provide floor drains in rest rooms, laundry, janitor's closets, kitchens, and two in the protective clothing laundry room.

f. Provide shut-off valves at all fixtures.

g. Provide a drinking fountain in the apparatus bay and electric water cooler near the entrance reception area.

h. Provide two air compressors, one dedicated for the SCBA and the other

shared by fire extinguisher maintenance and the apparatus room. Intake air must be located away from the following:

- Any contaminated air source
 - Vehicular exhaust fumes
 - Emergency generator
 - Rest room and kitchen exhaust
 - Mechanical exhausts
- i. Provide frost-free hose bibs on all exterior walls if required by local climatic conditions.
- j. Provide metering for gas and water service.
- k. Provide grease traps for kitchen drains.
- l. Provide oil separators at drains in apparatus rooms, protective clothing laundry, and maintenance areas.

5. Electrical Power

- a. Provide electric service and distribution equipment, including metering, wiring, and electrical devices. Provide for telecommunications and data wiring, fire alarms, and intrusion detection system.
- b. Provide automatic emergency generator with capability to power all doors and lighting in apparatus room, bedrooms, rest rooms, day/dining rooms and other areas based on local needs.
- c. Provide emergency power hook-up for kitchen equipment if the fire station is to be used as an essential feeding facility.
- d. Provide uninterrupted power supply (UPS) to support full operation of all equipment, including data automation, alarm communications room, and electric pin pad cypher lock.

e. Provide special power outlets and circuits for all user-furnished equipment as required.

f. Include an auto-shutoff timer for all cooking appliances.

6. Lighting

- a. General lighting should be fluorescent with low temperature energy efficient ballasts and lamps, as applicable.
- b. Provide interior and exterior lighting control systems, including ambient light dimmers and multiple switching for low ambient light levels and energy conservation.
- c. Rate incandescent lighting lamps at 2,500 hours.
- d. Provide high-intensity discharge (HID) lighting for the apparatus room parking apron to permit exterior servicing and maintenance of vehicles during evening hours.
- e. Training room lighting should be fluorescent, supplemented with incandescent accent lighting. Provide multiple switching and dimming controls for low ambient light levels, and energy conservation.
- f. Provide master lighting override controls in the communications control room for the private rooms, sleeping quarters and the apparatus room.
- g. Provide red strobe lighting on facility interior and exterior to alert firefighters of an emergency response.
- h. At parking areas and walkways, use HID light sources controlled by combination time clock/photo cells.
- i. Provide night lighting in apparatus room and corridors.
- j. Provide low ambient floor lighting in sleeping room corridors.

7. Fire Protection

- a. Facilities should be designed of Type B occupancy, noncombustible construction with fire protection systems.
- b. In new construction, provide an automatic sprinkler system throughout, with smoke detectors in all sleeping areas. Smoke detector activation sounds an alarm throughout the fire station.
- c. In renovation projects, provide an automatic sprinkler system throughout, with smoke detectors in all sleeping areas. Activation of a smoke detector should initiate the audible and visual fire alarm system.
- d. Heat detectors are hard-wired to the fire alarm system and activate the alarm throughout.
- e. Provide a fire detection/suppression annunciator panel for the building in the alarm communications center.
- f. The annunciator panel should indicate the location of detectors that have activated.
- g. Provide audible and visual fire alarm systems in personnel sleeping areas. Tone should gradually increase in volume with a strobe light.
- h. Provide appropriate fire protection at food preparation facilities. Protected openings between such areas and adjacent dining areas are not required. ■

Chapter 4

Functional Area and Space Criteria

A. General

1. This chapter presents specific criteria applicable to the design of each functional area of the fire station. Primary design considerations for each functional area are presented indicating the anticipated:
 - a. Use and performance
 - b. Space organization and character
 - c. Relationship between spaces of its components
2. Specific criteria are provided concerning the following:
 - a. Size and critical dimensions
 - b. Furnishings and equipment
 - c. Technical requirements
3. For additional technical requirements, refer to the general considerations presented in Chapter 3, Section C, Building Systems.
4. The criteria in this chapter apply to both large and small facilities.
5. Specific guidance for both sizes of prototypical facilities is presented with recommendations for space sizes and capacities, supplemented by standard use and size factors as appropriate.

These recommendations should be modified during design of an individual project to reflect local

program requirements and capacity needs.

6. For specific projects, the space requirements and sizes should be based on the required personnel and vehicles for each installation. Actual, authorized, or funded positions fluctuate annually based on funding and overall Air Force manpower strength requirements; these numbers normally are less than the minimum required and should not be used to scope space requirements.

B. Alarm Communications Center

1. *Primary Design Considerations*
 - a. *Use and Performance*
 - ◆ **Alarm Communications Center** – Design for maximum survivability and operability during natural disasters and all contingency threat conditions.
 - ◆ **Communications Control Room** – Provide an enclosed, secure room for communications control.

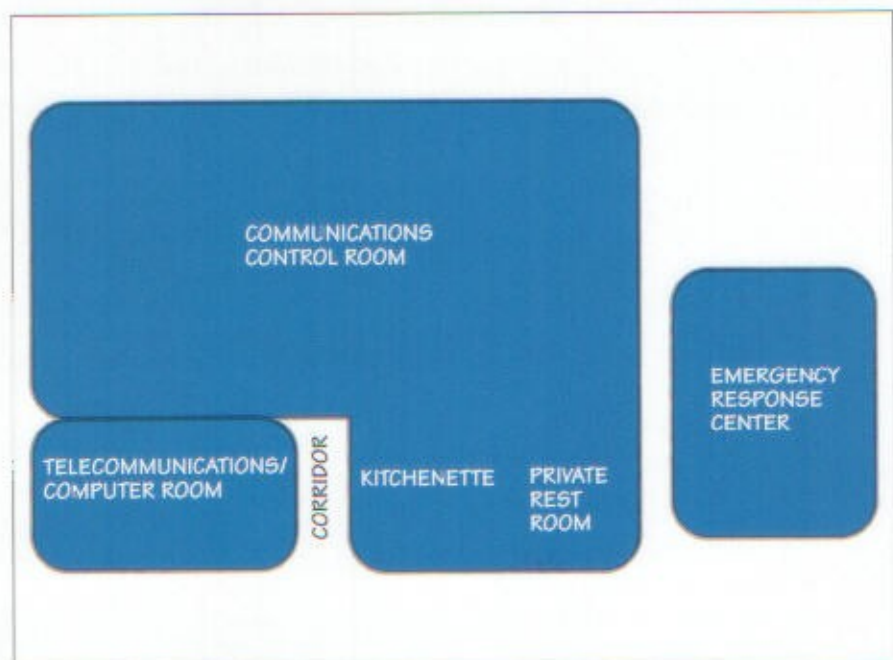


Figure 4-A: Alarm communications center functional area relationships

- ◆ **Kitchenette/Private Rest Room** – Provide a kitchenette/private rest room within the confines of the communications control room.
 - ◆ **Emergency Response Center** – Design a room for eight persons to use in real world emergency situations.
 - ◆ **Telecommunications/Computer Room** – Provide a room for the computer, telephone switch and UPS.
- b. Space Organization and Character**
- ◆ The fire alarm communications center should have an unobscured view of the apparatus parking ramp and flight line.
 - ◆ Design the fire alarm communications center to restrict outside noise level.
- c. Relationship Between Spaces**
- ◆ Provide visibility of the apparatus ramp.
 - ◆ Provide a closed circuit video camera system to monitor the main entrance and the apparatus room from the communications control room.
 - ◆ Large fire stations have the option of a raised access floor with under-floor HVAC.
 - ◆ Option for a pass-through window from the communications control room to the emergency response center.
 - ◆ In small fire stations, provide direct access from the communications control room to station captain's office.
- ◆ The kitchenette/private rest room is not shared with the public or other administrative personnel.
 - ◆ Provide a door between the communications control room and the telecommunications/computer room.
- 2. Communications Control Room**
- a. Size and Critical Dimensions**
- ◆ Refer to Tables 5-A or 5-B for space sizes.
 - ◆ Design to accommodate six persons in a large fire station.
 - ◆ Design to accommodate two persons in a small fire station.
 - ◆ Do not locate communications control room in towers.
- b. Furnishings and Equipment**
- ◆ Furnish with a state-of-the-art control center console.
 - ◆ Install modular system components for the work station with computer screens mounted in sloped console surfaces.
 - ◆ Install tinted windows with blinds in the communications control room.
 - ◆ Provide for a foot pedal activated crash net radio.
 - ◆ Provide for a state-of-the-art recording system for all emergency telephone and radio conversations.
 - ◆ Provide hurricane shutters in areas prone to severe weather.
- ◆ Provide a TV monitor to view the apparatus room and the main entrance.
 - ◆ Provide switches to the apparatus room overhead doors, opening the doors, not closing them.
 - ◆ Provide for a wall-mounted base grid coordinate map.
 - ◆ Provide a map rack system for other utility maps.
 - ◆ Provide for task lighting at consoles.
 - ◆ Provide ergonomically designed seating.
 - ◆ Provide safes for classified technical manuals.
- c. Technical Requirements**
- ◆ Provide separate environmental control equipment including HVAC for the communications control room.
 - ◆ Provide walls with a minimum Sound Transmission Class (STC) rating of 45 for the communications control room.
 - ◆ Provide a secured line for a fax machine.
 - ◆ Provide space for Emergency Information Systems (EIS) computer area.
 - ◆ Provide simultaneous light control and audible alert to all of the fire station including administration, technical services, and sleeping areas.

- ◆ Provide a pin pad/cylinder type electric lock or strike with a remote push button release. Also provide manual key override of the lock to gain access to the communications control room in an emergency. Electric lock or strike to be connected to the UPS.

3. Kitchenette/Private Rest Room

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide private rest room without kitchenette in small fire station.
- ◆ Provide a handicapped-accessible rest room without a shower.
- ◆ Locate within the communications control room.
- ◆ Private rest room for alarm communications operator only.
- ◆ Provide a small coat closet with a clothes rod and shelf.

b. Furnishings and Equipment

- ◆ In the kitchenette, provide base and wall cabinets with a bar sink.
- ◆ Furnish with a microwave oven, under-counter refrigerator, coffee maker, and hot plates.

4. Emergency Response Center

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ Design to accommodate an eight person conference table and work counter for four individuals.

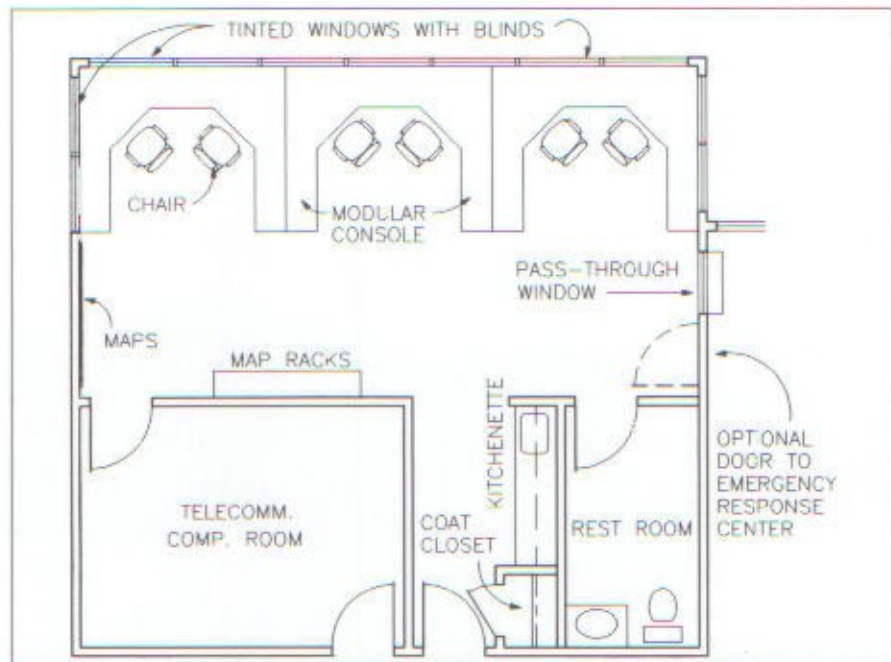


Figure 4-B: Large fire station communications control room



The communications control room should feature a state-of-the-art control console and ergonomically designed seating for personnel.

b. Furnishings and Equipment

- ◆ Furnish with boat-shaped conference table and work counter.
- ◆ Consider providing a pass-through window from the communications control room to the emergency response center.

c. Technical Requirements

- ◆ Provide walls with a minimum STC rating of 45.
- ◆ Provide for a total of eight telecommunications, computer and electrical outlets, with four at the work counter and four at the table.

5. Telecommunications/ Computer Room

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Additional space may be required for EIS.

b. Furnishings and Equipment

- ◆ Provide for a mini-frame computer system.
- ◆ Provide for various PCs as required.
- ◆ Provide for the telephone switch.
- ◆ Provide for a UPS system to support the fire alarm communications center.
- ◆ Provide floor to ceiling painted plywood panels for installing the telecommunications cables.
- ◆ Option of raised access floor at large fire stations.

c. Technical Requirements

- ◆ Locate the computer room adjacent to the communications control room.

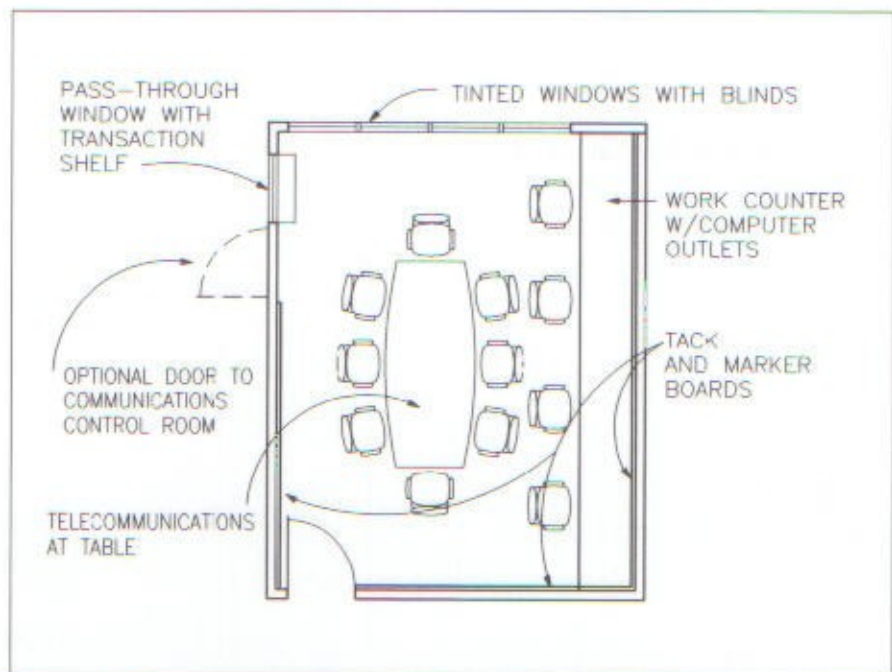


Figure 4-C: Emergency response center



Furnish the emergency response center with a boat-shaped conference table and a work counter.

- ◆ Wire functional areas in the fire station for local area network (LAN) computers as required.
- ◆ Provide separate environmental control equipment including air conditioning for the telecommunications/computer room.
- ◆ Provide surge protection and clean power for all computer room equipment.
- ◆ Utility systems should include sufficient redundancy to allow for equipment maintenance and contingencies 24 hours a day.
- ◆ Provide fiber optics backbone between the large fire station and the small fire station.
- ◆ Provide an electric strike or manual cypher lock to the telecommunications/computer room from the corridor.

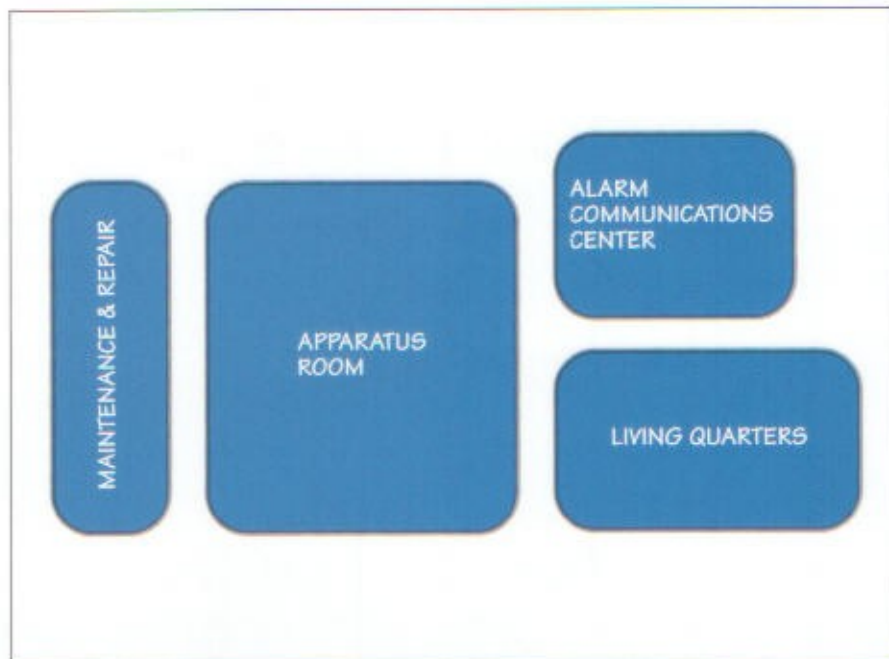


Figure 4-D: Apparatus room functional area relationships

C. Apparatus Room

1. Primary Design Considerations

a. Use and Performance

- ◆ Used for parking fire protection vehicles, and is sometimes used for performing maintenance on the vehicles. At some facilities, the vehicles back into the bay.
- ◆ Provide interior stall space for emergency vehicles.
- ◆ Provide drive-through bays for crash and structural trucks if new construction.
- ◆ Aircraft rescue and fire fighting vehicles (ARFF) face the flight line directly behind the overhead doors. Structural fire fighting vehicles as well as other vehicles are parked in



The apparatus room is used for fire protection vehicle parking and maintenance. New facilities should provide drive-through bays.

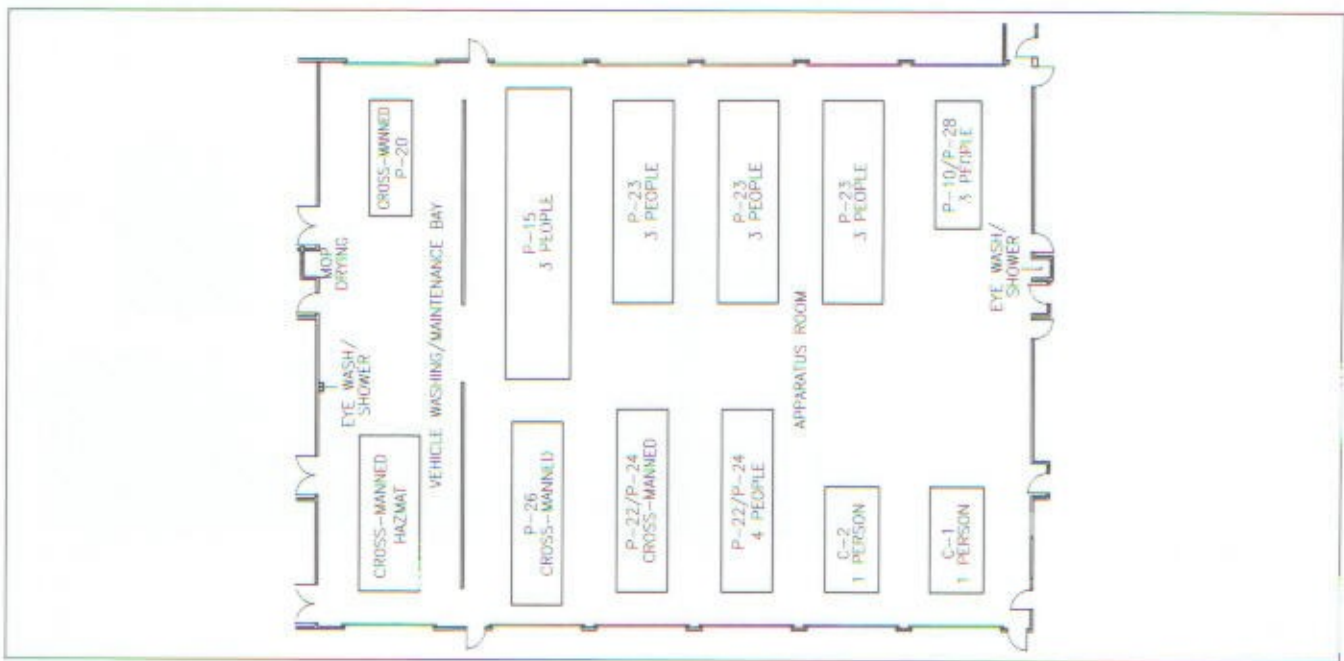


Figure 4-E: Large fire station apparatus room

spaces behind ARFF vehicles facing out the structural side of the drive-through bays.

- ◆ Provide a bay for an aerial ladder vehicle, when authorized.
- ◆ One drive-through apparatus bay is authorized for the fire chief and assistant chief's vehicles.

b. Space Organization and Character

- ◆ Provide exits from the apparatus room directly to the outside, in accordance with the applicable building codes.
- ◆ Design the apparatus room to include a drive-through washing and maintenance bay. Separate this maintenance bay from the other bays.

c. Relationship Between Spaces

- ◆ The apparatus room should be located near the living quarters.
- ◆ Locate maintenance shop areas and firefighting agent storage adjacent to the apparatus room.

2. Apparatus Room - Large Fire Station

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ A minimum of six drive-through bays are required in the large fire station.
- ◆ Provide at least one drive-through vehicle bay with the required overhead door size and clear ceiling height to accommodate the P-15 vehicle, where assigned.
- ◆ Design all other drive-through bays to accommodate P-23 vehicles.
- ◆ Design drive-through bays long enough for vehicles to be back-to-back. Provide the following minimum dimensions at each vehicle:
 - 6 feet between vehicles and the fire station structure
 - 7 feet between vehicles (side to side)
 - 8 feet between vehicles (rear to rear)

- 5 feet between vehicles and overhead doors

- ◆ Ceiling height should mean the clear height below any structural member, light fixtures, heating equipment, overhead doors in open position.

- ◆ For fire stations housing both ARFF vehicles and structural fire fighting vehicles, use the door size and a minimum clear ceiling height for ARFF vehicles.

b. Furnishings and Equipment

- ◆ Fire fighting vehicles are authorized under Table of Allowance 012. This should be validated against projected vehicle requirements.
- ◆ Provide heavy-duty insulated apparatus room doors at all locations subject to low temperatures.
 - Equip doors with a signaling system to indicate when they are fully raised. The red and

green indicators should be located on the driver's sides, mounted six feet above finished floor.

- Doors may be equipped with radio-operated closing devices activated from the vehicles.
- Equip doors with automatic reverse and/or electric eye devices that activate when the door contacts an obstruction.
- Do not provide man doors in the overhead doors.
- Provide a manual means to open overhead doors in case of power failure.



Place a trench drain parallel to the centerline of each vehicle. All apparatus room drains should have a fine grate cover and be connected to an approved oil/water separator.

c. Technical Requirements

- ◆ Design concrete floors to support vehicle weights shown in Table 4-A.
- ◆ Provide an emergency eye wash fountain and shower.
- ◆ Provide a foot-operated mop sink.
- ◆ Provide an indoor mop hanging rack in vehicle washing and maintenance bay.
- ◆ Provide minimum 3-inch diameter water service with 2-1/2-inch diameter National Standard Threads ball-valved outlet to each vehicle.
- ◆ Locate electrical outlets 36 inches above the floor.
- ◆ Provide a minimum of one standard hot and cold water garden hose bib for every two vehicle bays.
- ◆ Provide low pressure compressed air system on self-retracting lines at each vehicle space for servicing vehicle tires, brakes, and operating air tools. This compressor is shared with the extinguisher

Aircraft Rescue Fire Fighting and Structural Vehicles Chart						
Vehicle No.	Vehicle Type	No. on Crew	Weight	Length	Width	Height
P-2	ARFF	3	66,800 lbs.	33 ft. 4 in.	10 ft. 0 in.	12 ft. 6 in.
P-4	ARFF	3	46,600 lbs.	33 ft. 4 in.	10 ft. 0 in.	10 ft. 10 in.
P-10	Rescue Truck	3	8,000 lbs.	31 ft. 8 in.	9 ft. 4 in.	10 ft. 10 in.
P-15	ARFF	3	130,860 lbs.	45 ft. 2 in.	10 ft. 0 in.	13 ft. 9 in.
P-18	Water Tanker	c.m.	54,000 lbs.	31 ft. 8 in.	9 ft. 4 in.	10 ft. 10 in.
P-19	ARFF	3	32,500 lbs.	33 ft. 4 in.	10 ft. 0 in.	12 ft. 6 in.
P-20	ARFF	c.m.	10,900 lbs.	33 ft. 4 in.	10 ft. 8 in.	12 ft. 6 in.
P-21	Ladder Truck	c.m.	68,700 lbs.	48 ft. 4 in.	9 ft. 4 in.	12 ft. 0 in.
P-22	Pumper	4	32,300 lbs.	31 ft. 8 in.	9 ft. 4 in.	10 ft. 10 in.
P-23	ARFF	3	77,900 lbs.	33 ft. 4 in.	10 ft. 0 in.	12 ft. 6 in.
P-23 EAAD**	ARFF	3	80,900 lbs.	33 ft. 4 in.	10 ft. 0 in.	16 ft. 6 in.
P-24	Pumper	4	36,700 lbs.	31 ft. 8 in.	9 ft. 4 in.	10 ft. 10 in.
P-26	Water Tanker	c.m.	70,000 lbs.	47 ft. 6 in.	9 ft. 4 in.	12 ft. 0 in.
P-27	Mini Pumper	2	11,000 lbs.	31 ft. 8 in.	9 ft. 4 in.	12 ft. 6 in.

*c.m.-cross manned

**EAAD-elevation agent application device

Table 4-A

maintenance shop. Refer to extinguisher maintenance area.

- ◆ Provide self-retracting electric drop cords between vehicle spaces for drop light and battery hook up.
- ◆ Utility systems should include sufficient redundancy to allow for equipment maintenance and contingencies because the fire station is operational 24 hours a day.
- ◆ Heat the apparatus room with a radiant tube type heating system (natural gas or electric).
 - Hot water heating is an option at bases where a central system plant is used to heat building.
- ◆ Provide for overhead ventilation of vehicle exhaust from apparatus room.
- ◆ Provide instant start fluorescent lighting in the apparatus room for safety purposes.
- ◆ Provide a non-skid apparatus room floor impervious to fuels (diesel fuel, JP-4 and JP-8), fire fighting chemicals and various automotive lubricants. The floor surface should not be affected by the weight of the vehicle or subject to it being pulled by the tires.
- ◆ Place a trench drain parallel to the centerline of each vehicle. All apparatus room drains should have a fine grate cover and be connected to an approved oil/water separator prior to interconnection to the sanitary sewer.
- ◆ Floors should be sloped to the trench drains.

3. Apparatus Room - Small Fire Station

a. Size and Critical Dimensions

- ◆ Refer to Table 5-B for space size.
- ◆ Stations that normally house a single fire vehicle should be designed for a minimum of two drive-through vehicle bays.
- ◆ Refer to large fire station apparatus room for additional notes on size and critical dimensions.

b. Furnishings and Equipment

- ◆ Refer to large fire station apparatus room for additional notes.

c. Technical Requirements

- ◆ Refer to large fire station apparatus room for additional notes.

D. Training Facilities

1. Primary Design Considerations

a. Use and Performance

- ◆ **Training Room** – Provide space for ongoing training in fire fighting issues and techniques. This space may also be used for fire prevention briefings.
- ◆ **Assistant Chief for Training Office** – Provide an office for the assistant chief for training.
- ◆ **Audiovisual Storage** – Provide an audiovisual storage room, which also functions as a rear-screen projection room.



Small fire stations are designed to supplement the emergency response needs of large fire stations that may be located away from the flight line.

- ◆ **Fire Fighting Computer Simulation Model (FFCSM)** – Provide an enclosed room to house the computer simulator.
 - ◆ **Testing/Training** – A separate space for independent study and/or independent testing.
 - ◆ **Physical Fitness** – Provide both indoor and outdoor space for physical fitness activities.
- b. Space Organization and Character**
- ◆ Training room should have a level floor surface to accommodate various table and chair layouts.
 - ◆ Physical fitness room should be a large, open room to accommodate various sized equipment.

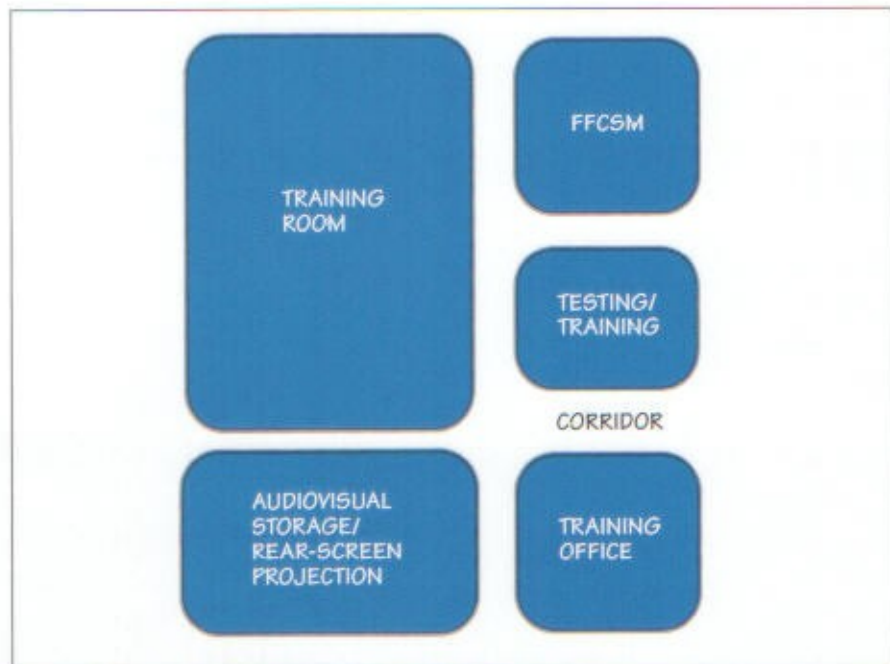


Figure 4-F: Training facilities functional area relationships

- c. Relationship Between Spaces**
- ◆ Physical fitness room does not require direct adjacency to the training room.
 - ◆ Locate the assistant chief for training office adjacent to the training room.
 - ◆ Training room should be located away from the private bedrooms.
 - ◆ Training room may be the day room in small fire stations.
 - ◆ Locate outdoor fitness areas near the apparatus room so the firefighters are always near the vehicles.
 - ◆ Provide for basketball and/or volleyball areas.

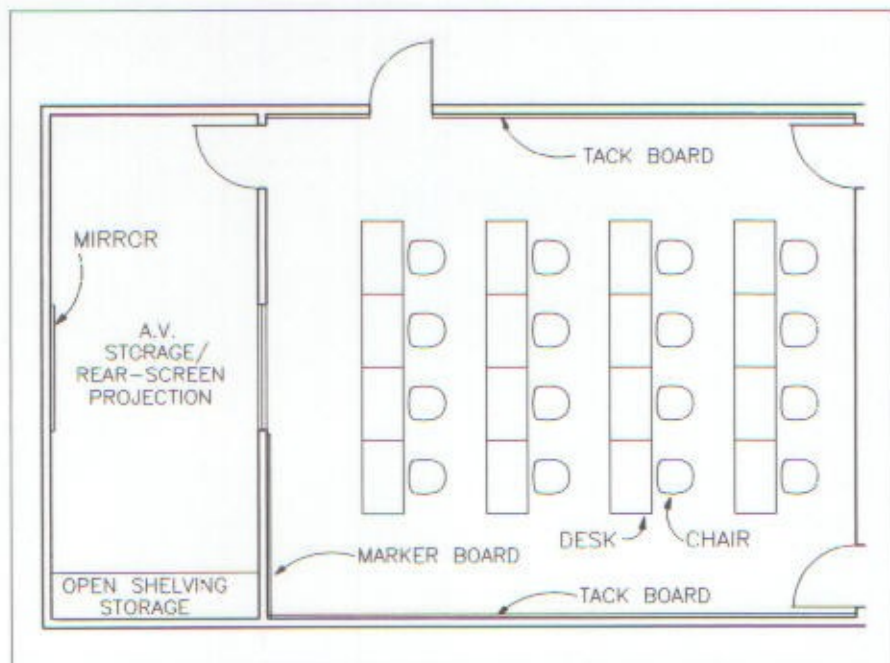


Figure 4-G: Training room and audiovisual storage

2. Training Room

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space sizes.
- ◆ Provide 20 square feet of training room space for each 8-hour and 24-hour position required at the station. Where six or fewer positions exist, 120 square feet should be added to the day room.
- ◆ Provide access to the training room from the base side of the fire station.

b. Furnishings and Equipment

- ◆ Furnish with movable desks and stacking chairs.
- ◆ Provide for overhead, slide, and video projection.

c. Technical Requirements

- ◆ In the training room, use fluorescent lighting. Supplement with incandescent accent lighting. Provide multiple switching and dimming controls for low ambient light levels and energy conservation.
- ◆ Provide walls with a minimum STC rating of 45.
- ◆ Provide electrical and data outlets as required.

3. Assistant Chief for Training Office

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Furnish with a desk, chair, credenza and two guest chairs.

c. Technical Requirements

- ◆ Provide lockable door.

4. Audiovisual Storage

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ Space also functions as rear-screen projection room.

b. Furnishings and Equipment

- ◆ Heavy-duty adjustable steel shelving.
- ◆ Provide for rear-screen projection.

c. Technical Requirements

- ◆ Provide walls with a minimum STC rating of 45.
- ◆ Audiovisual, electrical, and computer outlets as required.
- ◆ Provide lockable door.

5. Fire Fighting Computer Simulation Model

a. Size and Critical Dimensions

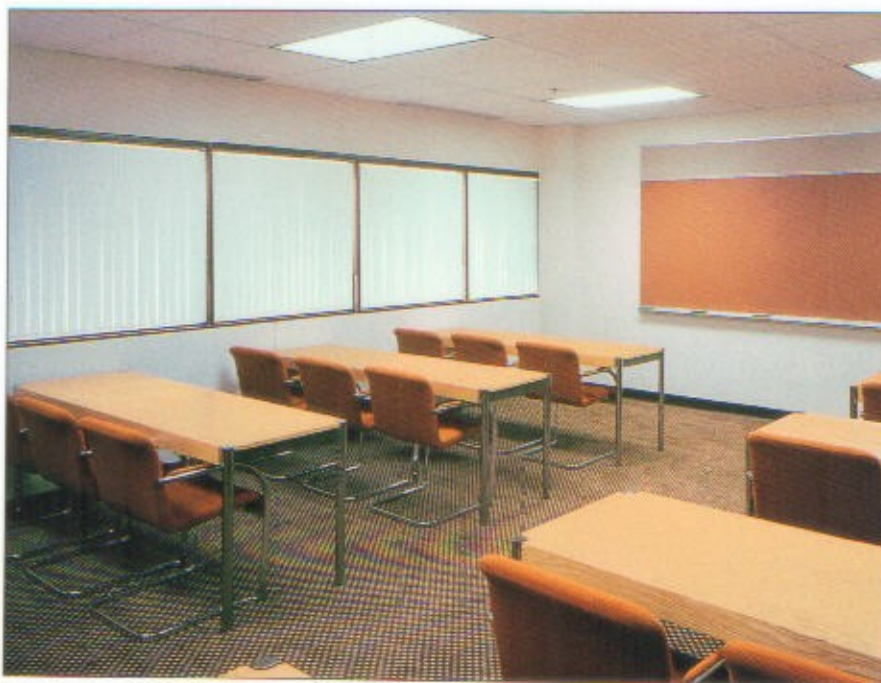
- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Design for two personal computer and monitor with CD ROM. This PC may be stored on a movable cart.

c. Technical Requirements

- ◆ Provide walls with a minimum STC rating of 45.



The training room is used for ongoing education in fire fighting issues and techniques, and may be used for fire prevention briefings.

6. Testing/Training

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space sizes.
- ◆ Area for individual testing and training.

b. Furnishings and Equipment

- ◆ Provide desk, chair, and task lighting.

c. Technical Requirements

- ◆ Provide computer outlets for testing.
- ◆ Provide glass in the door for supervision.

7. Physical Fitness

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.

b. Furnishings and Equipment

- ◆ Design for the following equipment:
 - Multistation exercise set
 - Free-weights
 - Exercise mats
 - Tread mills
 - Stair stepper machines
 - Stationary bikes
 - Rowing machines
- ◆ Provide full height and width mirror along one wall of room.
- ◆ Provide computer stations for physical fitness evaluations.
- ◆ Install floor consisting of interlocking cushion mats suitable for use with free-weights.
- ◆ Provide for storage of exercise mats.
- ◆ Provide for ceiling-mounted television.

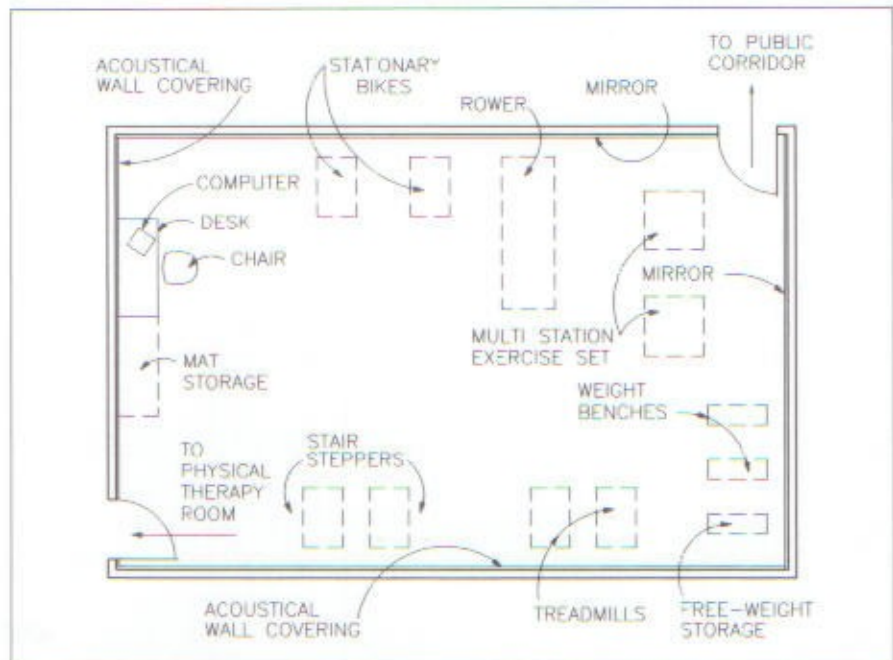
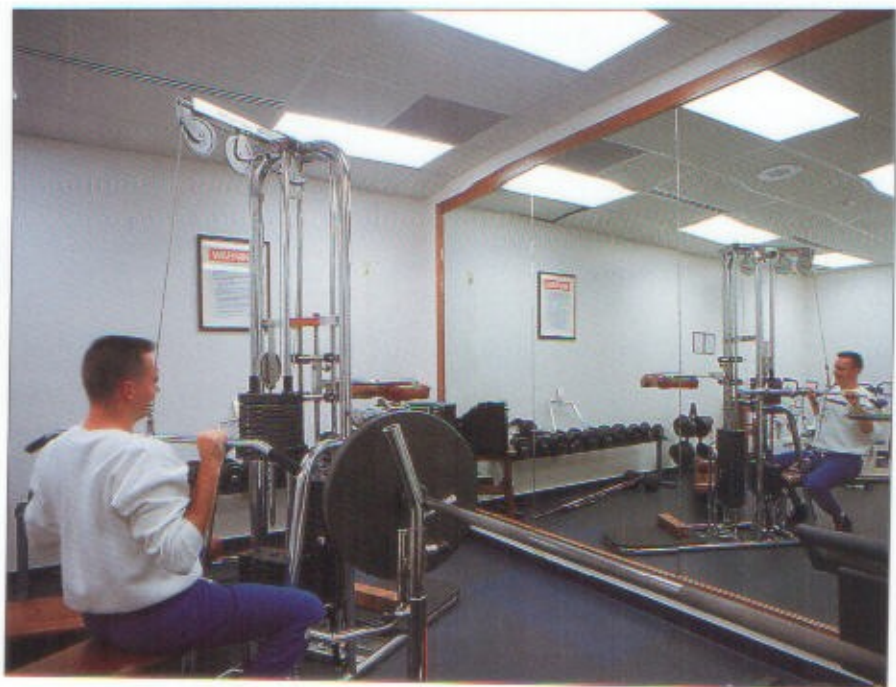


Figure 4-H: Physical fitness room



The physical fitness room should feature a full height and width mirror along one wall of the room to aid in training.

c. Technical Requirements

- ◆ Provide appropriate electrical outlets for equipment.
- ◆ Provide an exhaust fan in the physical fitness room.

E. Living Quarters

1. Primary Design Considerations

a. Use and Performance

- ◆ **Private Bedrooms** – Private sleeping rooms for persons on 24-hour shifts.
- ◆ **Personal Lockers** – Storage area for casual or physical fitness clothes and personal items.
- ◆ **Physical Therapy Room** – For coordinated therapeutic use by fire fighting personnel.
- ◆ **Rest Rooms/Showers** – Separate private rest rooms/shower rooms for men and women firefighters.
- ◆ **Laundry** – Used for the laundering of physical fitness and duty uniform clothing.

b. Space Organization and Character

- ◆ Organize the space to flow from public to semi-private to private spaces.
- ◆ The spaces should be informal and relaxed, more residential than institutional in character.

c. Relationship Between Spaces

- ◆ Locate bedroom areas on the same level and as close as possible to the apparatus room.
 - Exits should not open directly into the apparatus room.
- ◆ The rest room/shower area should be adjacent to both the private bedrooms and personal locker areas, and be accessible via a private corridor.
- ◆ Access to the physical therapy room is via private corridor.
- ◆ Locate bedrooms away from both recreational/dining areas and maintenance, repair, storage and support areas.

2. Private Bedrooms

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Determine space for bedroom with closet for duty uniforms, based on 110 net square feet for each 24-hour position.

b. Furnishings and Equipment

- ◆ Minimum furniture and equipment requirements for bedrooms are as follows:
 - One bed
 - One night stand
 - One desk and chair
 - One lamp
 - Two lockable closets, (one for each shift)
- ◆ Provide storage for pillows and linens under the bed.

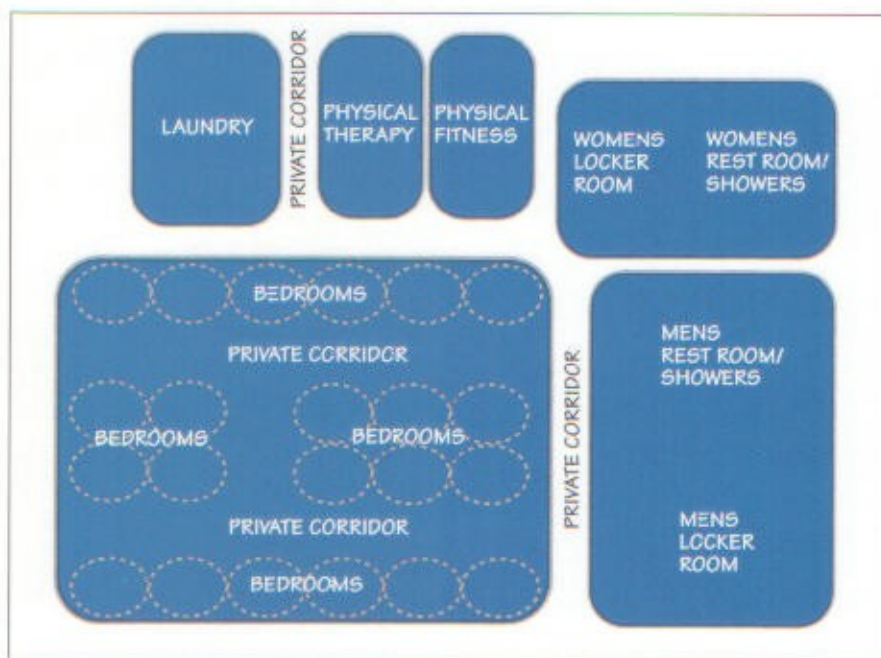


Figure 4-1: Living quarter functional area relationships

c. Technical Requirements

- ◆ Divide sleeping area into bedrooms with one person per room.
- ◆ Exit from each room should lead to a private corridor.
- ◆ Provide low ambient lighting in private corridors.
- ◆ Provide walls with minimum STC rating of 42.
- ◆ Provide intercom system from each bedroom and the communications control room.
- ◆ Provide visual and audible alarms in each bedroom, controlled from the communications control room.
- ◆ Provide for cable television.

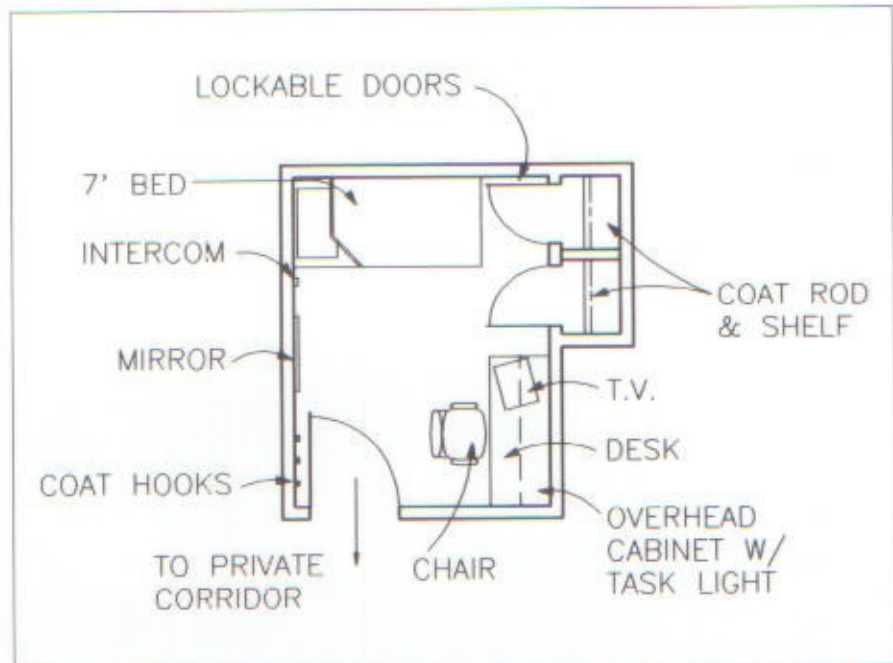


Figure 4-J: Private bedroom



Private bedrooms should be designed for relaxation and comfort as the firefighters' "home away from home."

3. Personal Lockers

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide one locker per person assigned to the fire station for personal items.
- ◆ Provide 6-foot clearance in front of locker areas for circulation and benches.

b. Furnishings and Equipment

- ◆ Install 24" x 24" single-tier metal louvered lockers with shelves, clothes, hooks, integral combination lock/handle and numbers.
- ◆ Gang lockers together with integral base and sloped tops.
- ◆ Provide manufacturer's standard hardwood bench.

c. Technical Requirements

- ◆ Protective clothing is not to be stored in these lockers.
- ◆ Provide visual and audible alarms in each locker room, controlled from the communications control room.

4. Physical Therapy Room

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space sizes.

b. Furnishings and Equipment

- ◆ Provide self-contained coed sauna and hydro therapeutic whirlpool.
- ◆ Provide access from living quarters via private corridor.

c. Technical Requirements

- ◆ Provide visual as well as audible alarms in physical therapy room, controlled from the communications control room.

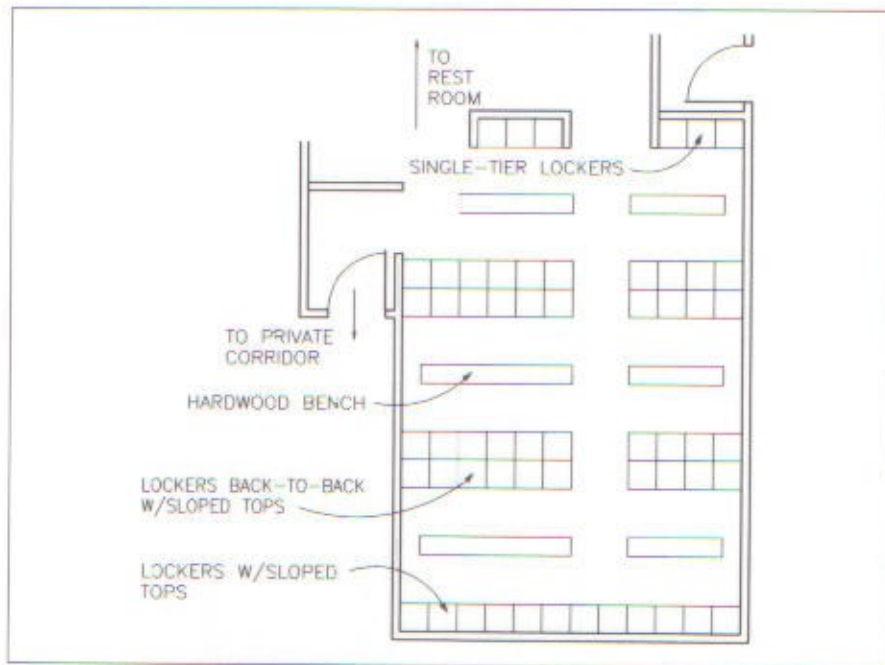


Figure 4-K: Personal lockers plan

5. Rest Rooms/Showers

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Use applicable codes to establish criteria for numbers of water closets, lavatories and urinals.
- ◆ Separate rest room and shower space should be provided for male and female personnel.
- ◆ Rest room and shower facilities for female personnel should be based on five percent of the total personnel.
- ◆ These facilities must be accessible via the corridor and locker rooms; they are for use by fire fighting personnel only.

b. Furnishings and Equipment

- ◆ Install all plumbing fixtures per code.
- ◆ Locate shower heads at 7 feet.
- ◆ Men – Water closets, lavatories, urinals, soap dispensers, paper towel dispenser and disposal units, paper holders, grab bars, mirrors, coat hooks, and partitions.
- ◆ Women – Same as men, minus urinals, plus sanitary napkin dispenser and disposal units.
- ◆ Install lavatory sinks in counter top. Provide lever handle controls or electronic sensors at water faucets.
- ◆ Provide individual fiberglass shower stall enclosures.

c. **Technical Requirements**

- ◆ Provide handicapped-accessible rest room.
- ◆ Provide a minimum STC rating of 45 between rest rooms and adjacent public or private spaces.
- ◆ Finish floors with non-skid ceramic tile.
- ◆ Finish walls with ceramic tile.
- ◆ Provide individual drying area.

6. **Laundry**

a. **Size and Critical Dimensions**

- ◆ Refer to Tables 5-A or 5-B for space sizes.

b. **Furnishings and Equipment**

- ◆ Specify heavy-duty top loading washer and front loading dryer.
- ◆ Furnish a table for folding clothes, etc.
- ◆ Provide a service sink with hot and cold water service.

c. **Technical Requirements**

- ◆ Laundry is for cleaning physical fitness and duty uniform clothes only.
- ◆ Refer to protective clothing laundry section for cleaning of protective clothing.
- ◆ Provide mechanical and electrical connections as required.

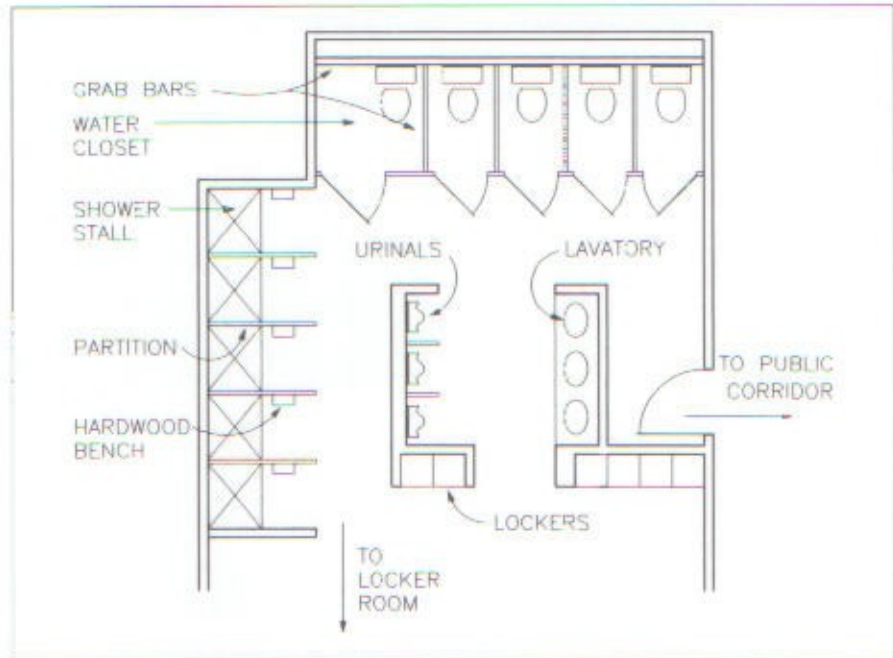


Figure 4-L: Rest room plan



Use applicable codes to establish criteria for the number of water closets, lavatories, and urinals in rest rooms.

F. Recreation/Dining

1. Primary Design Considerations

a. Use and Performance

- ◆ **Television Room** – Area for television viewing.
- ◆ **Day Room** – Provide a room for quiet activities.
- ◆ **Vending** – Provide alcove area for soda/snack vending and coffee machines.
- ◆ **Kitchen** – Area equipped with light commercial equipment for use by contract food service in preparing and serving meals. May be used by fire fighting personnel after hours.

- ◆ **Kitchen Storage** – Area for storage of paper dining items, staple food items and cooking utensils.

- ◆ **Serving Line** – Area for selecting, ordering and waiting for food to be prepared.
- ◆ **Dining Area** – Table and chair, and booth seating in dining room for fire station personnel only.

b. Space Organization and Character

- ◆ The spaces should be informal and relaxed, more residential than institutional in character.
- ◆ Organize kitchen area and serving line to flow from tray pick up to ordering, to cashier.
- ◆ The day room may be an extension of the dining area.

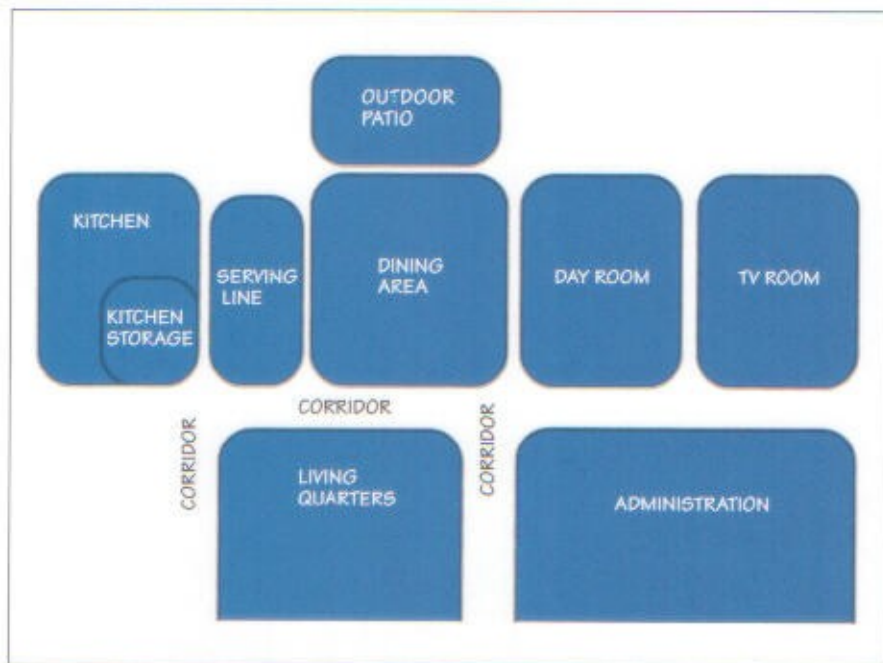


Figure 4-M: Recreation/dining functional area relationships

c. Relationship Between Spaces

- ◆ Locate the recreation and dining areas nearby the living quarters.
- ◆ Locate kitchen and serving line adjacent to the dining area.
- ◆ Provide outdoor dining and barbecue area with privacy enclosure.
- ◆ Locate kitchen storage adjacent to the kitchen.
- ◆ TV and day room to be separate, but in close proximity.

2. Television Room

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A and 5-B for space sizes.
- ◆ Provide a minimum 250 square feet for television room in all stations, plus 10 square feet for each 24-hour position.

b. Furnishings and Equipment

- ◆ Provide for wide-screen color television.
- ◆ Furnish with durable and comfortable seating areas.
- ◆ Furnish with coffee and end tables for magazines, drinks, etc.

c. **Technical Requirements**

- ◆ Provide for daylighting control.
- ◆ Provide for television cable installation.
- ◆ Provide energy-efficient lighting with dimming system.

3. **Day Room**

a. **Size and Critical Dimensions**

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide a minimum 200 square feet for day room in all stations plus 10 square feet for each 24-hour position.

b. **Furnishings and Equipment**

- ◆ Furnish with durable and comfortable seating areas.
- ◆ Furnish with coffee and end tables for magazine, drinks, etc.
- ◆ Design areas for indoor recreational activities.

c. **Technical Requirements**

- ◆ In small fire stations, the day room may also function as the training area. Provide for computer and electrical outlets as required for use as a training room.

4. **Vending**

a. **Size and Critical Dimensions**

- ◆ Refer to Tables 5-A and 5-B for space sizes.
- ◆ Vending area could be located in an alcove off the corridor.

b. **Furnishings and Equipment**

- ◆ Provide for soda, snack, and ice machines.

c. **Technical Requirements**

- ◆ Provide dedicated circuits as required.

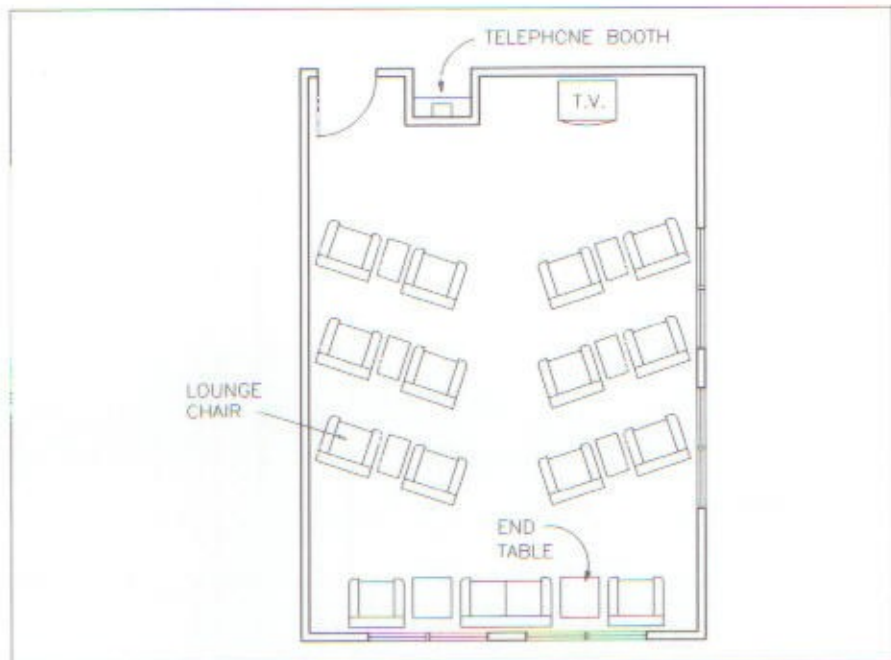


Figure 4-N: Television room



The television room should be designed for comfort, as well as durability.

5. Kitchen

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide a minimum 200 square feet for a kitchen area.
- ◆ If kitchen facilities are to be used for purposes other than firefighter in-station meal program, the square footage is authorized under Category Code 723-388.

b. Furnishings and Equipment

- ◆ Equipment requirements should be determined by food services and fire protection management.
- ◆ Provide either light commercial or residential kitchen equipment as follows:

- Worktable-counter top
- Built-in stove with oven
- Grill with hood
- Deep fat fryer
- Triple sink with garbage disposal
- Heavy-duty commercial dishwasher
- Ice machine
- Lockable refrigerator with freezer, 25 cf for food service use only
- Two refrigerators/freezers for firefighter personnel food

c. Technical Requirements

- ◆ Plumbing fixtures to be stainless steel.
- ◆ Provide range hoods, air ventilation and fire suppression systems as required by applicable building codes.

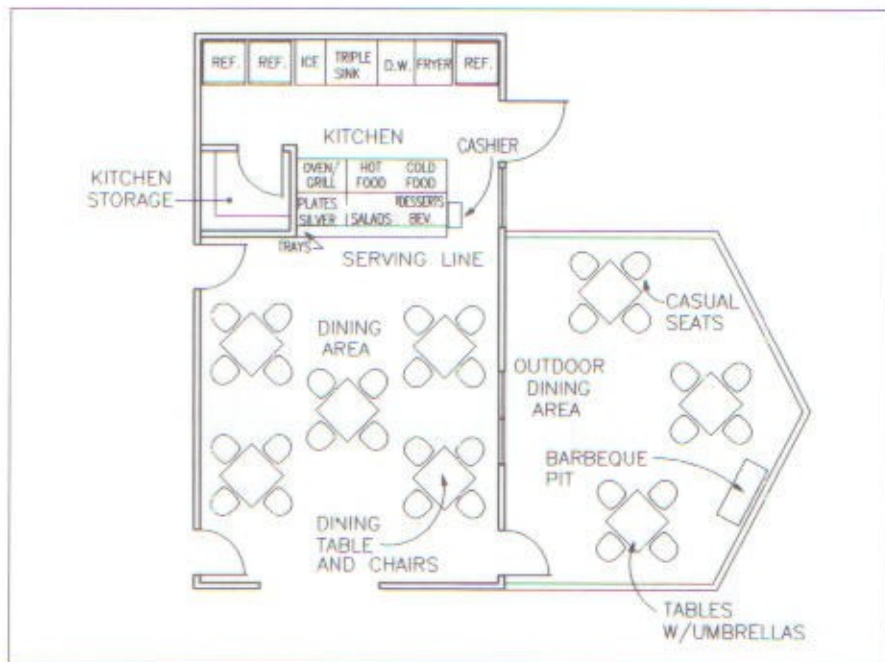


Figure 4-O: Kitchen serving line, dining area, and outdoor dining



The serving line should include tray and silverware storage bins, an entree serving line with steam heat or ice trays, and sneeze guards or other protective surfaces.

- ◆ If the contract food service in-station meal program is maintained, provide commercial cooking equipment.
- ◆ Provide residential cooking equipment at small fire stations.

6. Kitchen Storage

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.

b. Furnishings and Equipment

- ◆ When a full-service commercial kitchen is planned, provide locker space for the food service personnel.
- ◆ Provide open shelving storage space for paper products, cups, plates, napkins, tablecloths, etc.

c. Technical Requirements

- ◆ Open shelving to be heavy duty.

7. Serving Line

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide a minimum 100 square feet for a serving line for the in-station meal program.

b. Furnishings and Equipment

- ◆ Serving line equipment includes:
 - Tray storage bins
 - Silverware storage bins
 - Four entree serving line, with steam heat or ice trays
 - Plate storage bin located behind serving line
 - Sneeze guards above food display racks
 - Glass storage tray
 - Carbonated beverage dispensers

c. Technical Requirements

- ◆ Equipment should be stainless steel.

8. Dining Area

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Determine dining space on the number of tables required to seat personnel with four persons per table with minimum of 40 square feet per table.

- ◆ Area does not include space for the serving line or food preparation.

- ◆ Option to provide an outdoor dining patio and barbeque area with privacy wall in addition to the required indoor dining area.

b. Furnishings and Equipment

- ◆ Furnish durable, good quality dining tables and chairs.

c. Technical Requirements

- ◆ Provide walls with a minimum STC rating of 35.



Consider providing an outdoor dining patio for barbequing and other social activities.

G. Administration

1. Primary Design

Considerations

a. Size and Critical Dimensions

- ◆ **Entrance/Reception** – An area to receive guests and visitors.
- ◆ **Fire Chief's Office** – A private office with adjacent conference room.
- ◆ **Fire Chief's Conference Room** – Private conference room shared with deputy fire chief.
- ◆ **Fire Chief's Bedroom** – Provide a separate bedroom for the fire chief sharing an adjacent rest room.
- ◆ **Deputy Fire Chief's Office** – A private office, adjacent to the conference room.
- ◆ **Assistant Chief for Operations' Office** – A private office with adjacent bedroom.
- ◆ **Assistant Chief for Operations' Bedroom** – Provide a separate bedroom sharing the adjacent rest room.
- ◆ **Rest Room** – Provide a rest room for administrative and public use.
- ◆ **Station Captain's Office/Bedroom** – Provide a private office with a bedroom alcove. This person performs detail work for the assistant chief for operations.
- ◆ **Assistant Chief for Technical Services' Office** – A private office adjacent to technical services staff room.
- ◆ **Technical Services Staff Office** – An office with two workstations and work counter.

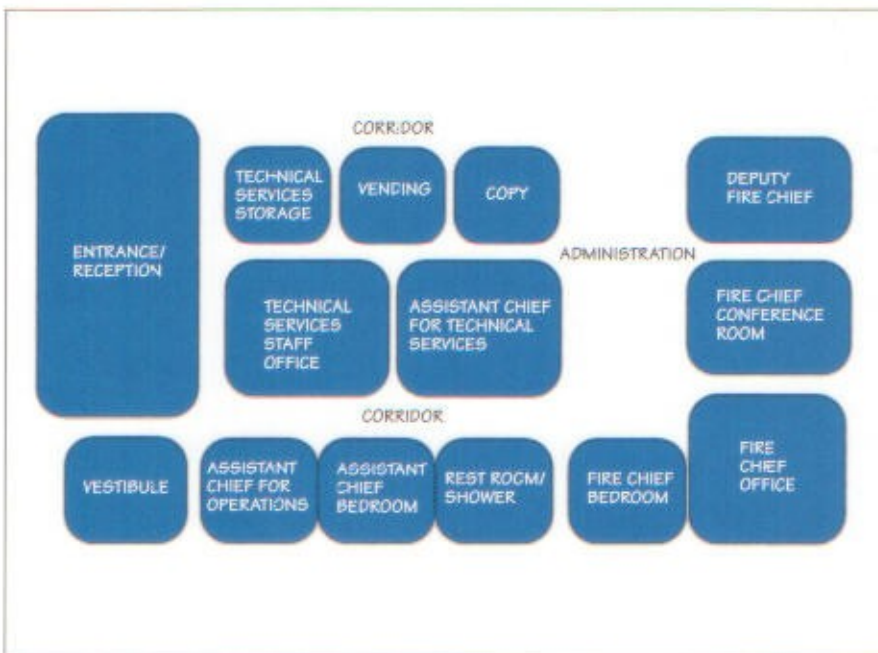


Figure 4-P: Administration functional area relationships

- ◆ **Technical Services Aids and Storage** – Storage room for technical service manuals and brochures.
 - ◆ **Administration Storage** – Provide area for office supplies and general files.
- #### b. Space Organization and Character
- ◆ The space should have a business-like character.
 - ◆ Offices should be grouped together in an administration area, separate from the other fire station functional areas.
- #### c. Relationship Between Spaces
- ◆ The conference room should be located between the deputy chief's office and the fire chief's office.
 - ◆ Bedrooms should be adjacent to the fire chief's office and the assistant chief for operations' office.
 - ◆ Locate the administration rest room between the fire chief and assistant chief's bedrooms.
 - ◆ Locate the station captain's office/bedroom separate from the administrative area near the crew.
- ### 2. Entrance/Reception
- #### a. Size and Critical Dimensions
- ◆ Refer to Tables 5-A or 5-B for space sizes.
- #### b. Furnishings and Equipment
- ◆ Provide for an administrative/receptionist workstation with a transaction counter.
 - ◆ Provide a private pay phone area for personal calls.
 - ◆ Furnish the waiting area with comfortable and durable seating.
 - ◆ Provide built-in lighted trophy

display case with lockable glass doors.

c. Technical Requirements

- ◆ Provide a TV camera for surveillance of the entrance reception vestibule from the communications control room.
- ◆ Provide for computer data outlets and the fire station administration telephone line at the administrative/receptionist workstation.

3. Fire Chief's Office

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Furnish with a desk, office chair, credenza, bookcase and guest chairs.

c. Technical Requirements

- ◆ Provide a minimum STC rating of 35 in the walls.
- ◆ Provide a lockable door.
- ◆ Provide telecommunications and computer outlets as required.

4. Fire Chief's Conference Room

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Furnish with a conference table and eight chairs.
- ◆ Provide marker and tack boards.

c. Technical Requirements

- ◆ Provide a minimum STC rating of 35 in the walls.
- ◆ Provide telecommunications and computer outlets as required.



Figure 4-Q: Fire chief's office, conference room, and bedroom



The fire chief's office should be furnished with a desk, credenza, bookcase, and guest chairs. Provide telecommunications and computer outlets as required.

5. Fire Chief's Bedroom

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ A private bedroom for the fire chief is authorized in large fire stations.

b. Furnishings and Equipment

- ◆ Provide the following equipment:
 - One bed
 - One night stand
 - One desk and chair
 - One lamp
 - Two lockable closets, one with a clothes rod and shelf, the other with six adjustable shelves
 - Storage for pillows and linens under the bed

c. Technical Requirements

- ◆ Provide light controls and audible alert to the bedroom from the communications control room for emergency response notification.
- ◆ Provide a lockable door.
- ◆ Provide telecommunications and computer outlets as required.
- ◆ Provide for cable television.
- ◆ Provide a minimum STC rating of 35 in the walls.

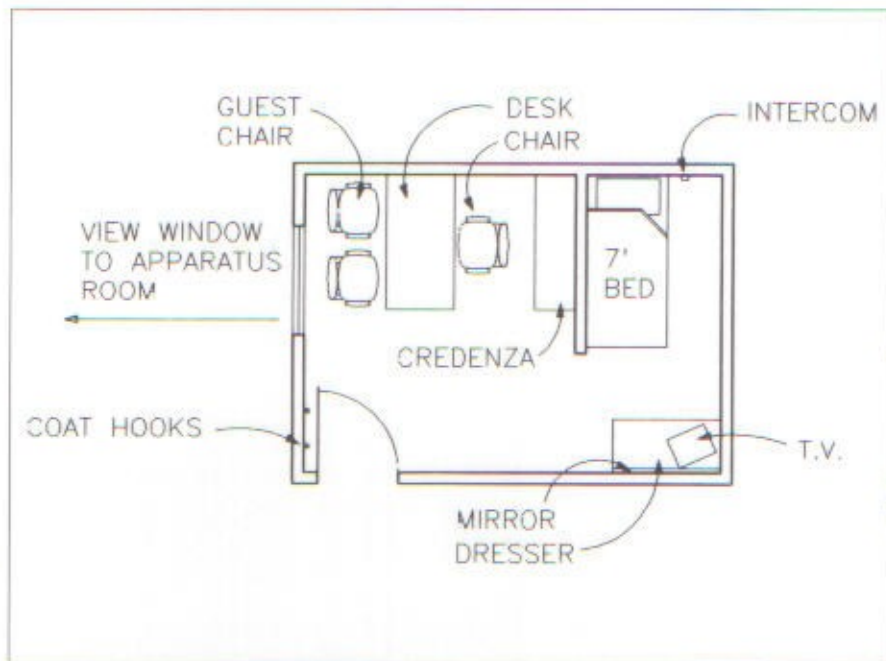


Figure 4-R: Station captain's office/private bedroom

6. Deputy Fire Chief's Office

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Furnish with desk, chair, guest chair, and bookcase.

c. Technical Requirements

- ◆ Provide a minimum STC rating of 35 in the walls.
- ◆ Provide a lockable door.
- ◆ Provide telecommunications and computer outlets as required.

7. Assistant Chief for Operations' Office

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Furnish with desk, chair, guest chair, and bookcase.

c. Technical Requirements

- ◆ Provide a minimum STC rating of 35 in the walls.
- ◆ Provide telecommunications and computer outlets as required.
- ◆ Provide a lockable door.

8. Assistant Chief for Operations' Bedroom

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ A private bedroom for the assistant chief for operations is authorized in the large fire station.

b. Furnishings and Equipment

- ◆ Provide the following equipment:
 - One bed
 - One night stand
 - One desk and chair
 - One lamp
 - Two lockable closets, both with a clothes rod and shelf
 - Storage for pillows and linens under the bed

c. Technical Requirements

- ◆ Provide light controls and audible alert to the bedroom from the communications control room for emergency response notification.
- ◆ Provide for cable television.
- ◆ Provide a minimum STC rating of 35 in the walls.
- ◆ Provide a lockable door.
- ◆ Provide telecommunications and computer outlets as required.

9. Rest Rooms

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ Consider the option of having two separate rest rooms, one for public use and one for personnel use.

b. Furnishings and Equipment

- ◆ Provide a shower stall, water closet, and lavatory sink.

c. Technical Requirements

- ◆ Locate the rest rooms between the fire chief and assistant chief's bedrooms.
- ◆ Provide handicapped-accessible rest rooms.
- ◆ Provide a minimum STC rating of 35 in the walls.

10. Station Captain's Office/Bedroom

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ At the small fire station, provide a separate office and bedroom.

b. Furnishings and Equipment

- ◆ Furnish with desk, chair, guest chairs, and bookcase.
- ◆ Furnish a Murphy bed or a sleeping alcove.

c. Technical Requirements

- ◆ Provide a lockable door.
- ◆ Provide telecommunications and computer outlets as required.
- ◆ Provide a minimum STC rating of 35 for the walls.

11. Assistant Chief for Technical Services' Office

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Furnish with a desk, chair, guest chairs, and a bookcase.

c. Technical Requirements

- ◆ Provide a lockable door.
- ◆ Provide telecommunications and computer outlets as required.
- ◆ Provide a minimum STC rating of 35 for the walls.

12. Technical Services Staff Office

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ Provide 65 square feet for each fire prevention staff position.

b. Furnishings and Equipment

- ◆ Provide systems furniture for workstations.
- ◆ Provide five high-lateral files 36- or 42-inches wide with cabinet above for manuals.
- ◆ Provide a work surface with task lighting for drawing review.
- ◆ Furnish with flat files for drawings.
- ◆ Provide a technical services library with full height bookcase.
- ◆ Provide for tube storage of drawings and specifications.

c. Technical Requirements

- ◆ Provide task lighting.
- ◆ Provide a lockable door.
- ◆ Provide telecommunications and computer outlets as required.

13. Technical Services Aids and Storage

- a. **Size and Critical Dimensions**
 - ◆ Refer to Table 5-A for space size.
- b. **Furnishings and Equipment**
 - ◆ Provide a file area of five-drawer vertical files.
 - ◆ Provide open shelving for fire prevention educational material.
- c. **Technical Requirements**
 - ◆ Provide a lockable door.

14. Administration Storage

- a. **Size and Critical Dimensions**
 - ◆ Refer to Tables 5-A or 5-B for space sizes.
- b. **Furnishings and Equipment**
 - ◆ Provide space for a printer, copy machine, and fax machine.

- ◆ Adjustable shelving for office supplies, copier paper, etc.
- c. **Technical Requirements**
 - ◆ Provide a lockable door.

H. Maintenance, Repair, Storage and Support

1. Primary Design Considerations

- a. **Use and Performance**
 - ◆ Provide for disinfecting facilities and storage areas when required to be in the fire station.
 - ◆ **Vehicle Maintenance Office** – Provide a mechanic’s office if maintenance occurs in the fire station. Otherwise, this room could be used as a labor union office.
 - ◆ **Vehicle Maintenance Parts and Tools** – Provide a supply parts room if maintenance occurs in the fire station.

- ◆ **Fire Fighting Agent Storage** – Area for storage of 55-gallon, or 5-gallon containers of agent; actual amount of agent determined by local requirements.
- ◆ **Hose Storage and Drying** – Provide an area for hose storage. Provide hose dryer if required.
- ◆ **Fire Extinguisher Maintenance/Repair and Storage** – Provide area for maintenance and repair.
- ◆ **SCBA Maintenance and Repair** – Provide space to store parts and perform maintenance on breathing apparatuses.
- ◆ **Protective Clothing Lockers** – Lockers for fire fighting clothing only. May be located above apparatus room on a mezzanine level.
- ◆ **Protective Clothing Laundry** – Provide a decontamination room for protective clothes and for medical decontamination.
- ◆ **Outdoor Tire Storage** – Provide a covered outside area with racks for vertical storage of tires.
- ◆ **General Storage** – Lockable storage for general purpose items.
- ◆ **Medical Storage** – Lockable storage must be sized to handle the volume of required emergency medical supplies.
- ◆ **Janitor’s Closet** – Provide an area with mop sink and storage for janitorial equipment and supplies.
- ◆ **Mechanical/Electrical/Telephone/Compressor Room** – Provide an enclosed room to house the mechanical, electrical and compressor equipment.

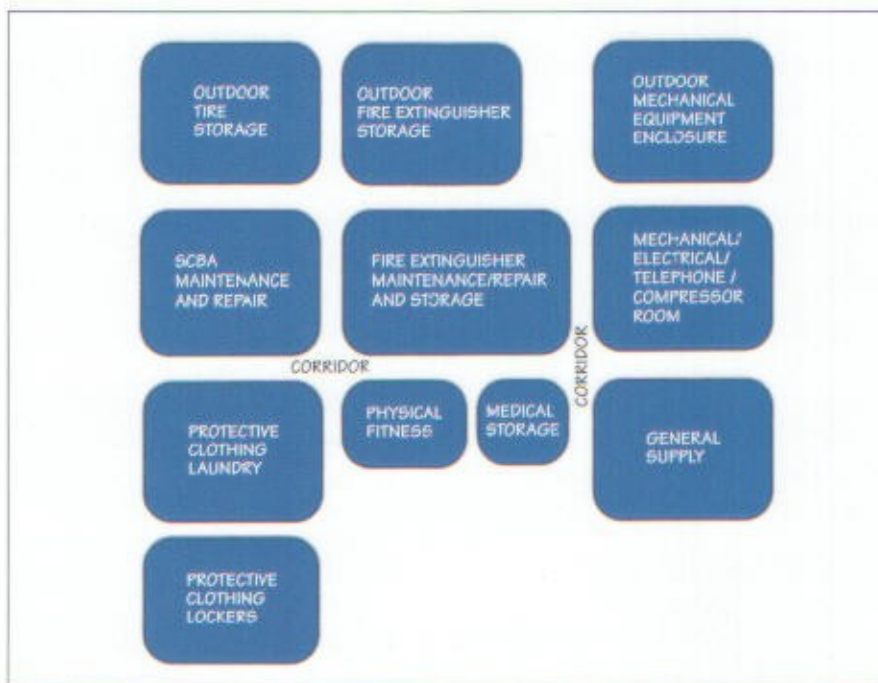


Figure 4-S: Maintenance, repair, storage and support area functional relationships

- ◆ **Public and Private Corridors** – Provide for adequate circulation with 6-foot-wide public corridors and 4-foot-wide private corridors.
 - ◆ **Disinfecting Facilities** – Fire departments that provide emergency medical operations should provide disinfecting facilities for cleaning emergency medical equipment.
- b. **Space Organization and Character**
- ◆ Should be organized in close proximity to apparatus room.
 - ◆ Working support areas should meet NFPA cleanliness requirements.

c. **Relationship Between Space**

- ◆ The protective clothing laundry and locker areas should be adjacent to each other and accessible from the exterior and/or apparatus room.
- ◆ Maintenance areas should be adjacent to the apparatus room.
- ◆ Fire fighting agent storage should be located adjacent to the apparatus room.

2. **Vehicle Maintenance Office**

- a. **Size and Critical Dimensions**
- ◆ Refer to Table 5-A for space size.
 - ◆ Provide this office for daily minor fire vehicle maintenance performed in the fire station.
 - ◆ Directly adjacent to maintenance bay and the vehicle maintenance parts and tools room.

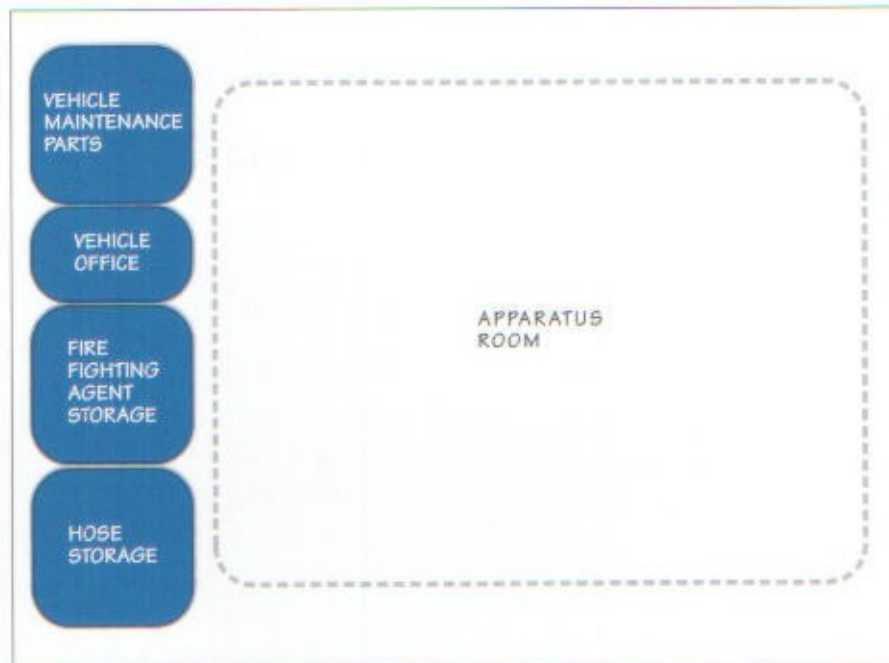


Figure 4-T: Vehicle maintenance functional area relationships

b. **Furnishings and Equipment**

- ◆ Provide a desk, chair and file area in the office.

c. **Technical Requirements**

- ◆ Provide telecommunications and computer outlets as required.

3. **Vehicle Maintenance Parts and Tools**

a. **Size and Critical Dimensions**

- ◆ Refer to Table 5-A for space size.
- ◆ Design additional space to support major fire vehicle maintenance/repair and parts cleaning equipment, jacks stands, tires, parts holding area, etc.

b. **Furnishings and Equipment**

- ◆ 24-inch-deep adjustable heavy-duty shelving.
- ◆ Bins for parts.
- ◆ Work bench for tools.

c. **Technical Requirements**

- ◆ Doors should be lockable.
- ◆ Directly adjacent to maintenance bay.

4. **Fire Fighting Agent Storage**

a. **Size and Critical Dimensions**

- ◆ Refer to Table 5-A for space size.
- ◆ Fire fighting agent storage will be provided in all stations based on the vehicles assigned that station.

b. **Furnishings and Equipment**

- ◆ Provide space for a foam trailer to be used for foam storage (1,000 gallons in trailer, 400 gallons in storage area).
- ◆ Provide space for 55-gallon drums or the equivalent 5-gallon containers.

c. **Technical Requirements**

- ◆ Foam storage outside requires a covered area.

5. Hose Storage and Drying

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.

b. Furnishings and Equipment

- ◆ Provide one oven for hose drying if required by climatic conditions.
- ◆ Provide racks for roll-up hose storage.

c. Technical Requirements

- ◆ Provide an area to lay out hoses for drying or for a drying oven.
- ◆ Size even to contain 50- and 100-foot sections of 5-inch-diameter hose.

6. Fire Extinguisher Maintenance/Repair and Storage

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ Provide 400 square feet for fire extinguisher maintenance if work is contracted.
- ◆ Provide an outside covered storage area to store fire extinguishers awaiting repair or pick up. Size to be determined by local requirements.

b. Furnishings and Equipment

- ◆ Design access for extinguisher delivery away from the apparatus room access pavements.

- ◆ Provide a storage area for fire extinguishers, especially foam and flight line extinguishers:
 - 20% back-up extinguishers
 - 10% broken extinguishers
 - 10% fixed-holding area for extinguishers on wheels
- ◆ Provide eyewash fountains in the extinguisher maintenance area.
- ◆ Provide a hood and exhaust system in the extinguisher maintenance area.
- ◆ Provide a double-leaf or roll-up door for delivery of extinguishers.



Provide racks for roll-up hose storage and an area to lay out hoses for drying or oven drying.

- ◆ Space should be provided to accommodate:
 - Work bench
 - Safety cage for recharging extinguishers
 - Spare parts bin
 - Flammable storage locker
 - Agent and nitrogen storage
 - Dry chemical extinguisher recharge kit
 - Floor scale
 - 1,500-lb. cylinder for halon recovery

c. Technical Requirements

- ◆ Design should comply with Air Force regulations.
- ◆ Provide for dry chemical, halon recovery.

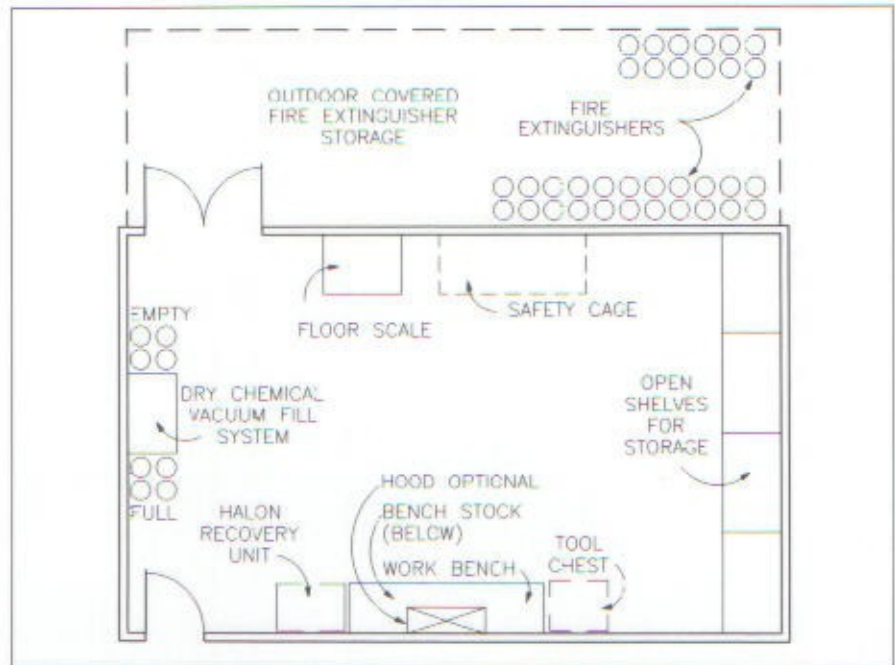


Figure 4-U: Extinguisher repair



Fire extinguisher repair space should include a work bench, safety cage, spare parts bin, and dry chemical extinguisher recharge kit.

7. Self-Contained Breathing Apparatus Maintenance and Repair

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ Provide a separate room for SCBA.

b. Furnishings and Equipment

- ◆ Provide storage space for 6 to 10 sets of SCBA.
- ◆ Provide storage for regulators and bottles.
- ◆ Provide for mask pressure checking machine.
- ◆ Provide dedicated air compressor.

c. Technical Requirements

- ◆ Provide a lockable area to maintain air regulators.
- ◆ Provide computer outlets to the SCBA maintenance area.
- ◆ Provide clean air intake if resupplying of SCBAs is performed in this area.

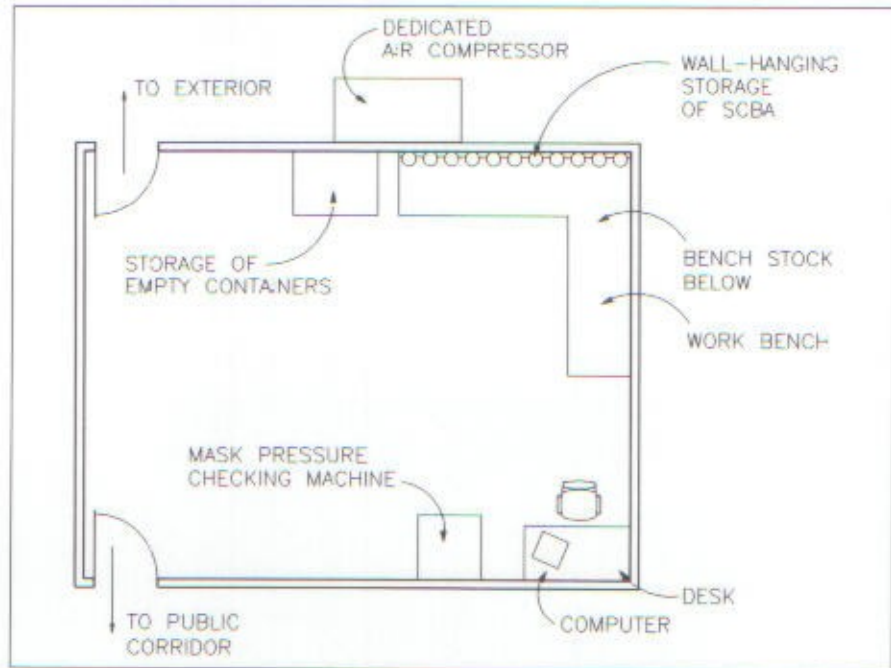


Figure 4-V: Self-contained breathing apparatus



Design the SCBA maintenance and repair area to store 6-10 sets of apparatus, along with a mask pressure checking machine.

8. *Protective Clothing Lockers*

a. *Size and Critical Dimensions*

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide 6 net square feet per authorized person for protective clothing locker space. (In existing stations, provide room or mezzanine; new stations should include a locker room.)
- ◆ Locate lockers near the apparatus bay.

b. *Furnishings and Equipment*

- ◆ Provide open wire mesh metal lockers sized 24-inches-wide by 24-inches-deep by 6-feet-high.
- ◆ Protective clothing includes jacket, pants, boots, hood, and SCBA.
- ◆ Should have shelves, clothes hooks, and an integral combination lock handle.

c. *Technical Requirements*

- ◆ Requires negative pressure in room for gases emitted while protective clothing is stored.
- ◆ Not for storage of civilian clothes.
- ◆ Design lockers to permit free air circulation around and through clothing. When enclosed lockers are used, the front and sizes must be of an open design.
- ◆ Provide area near the apparatus room.

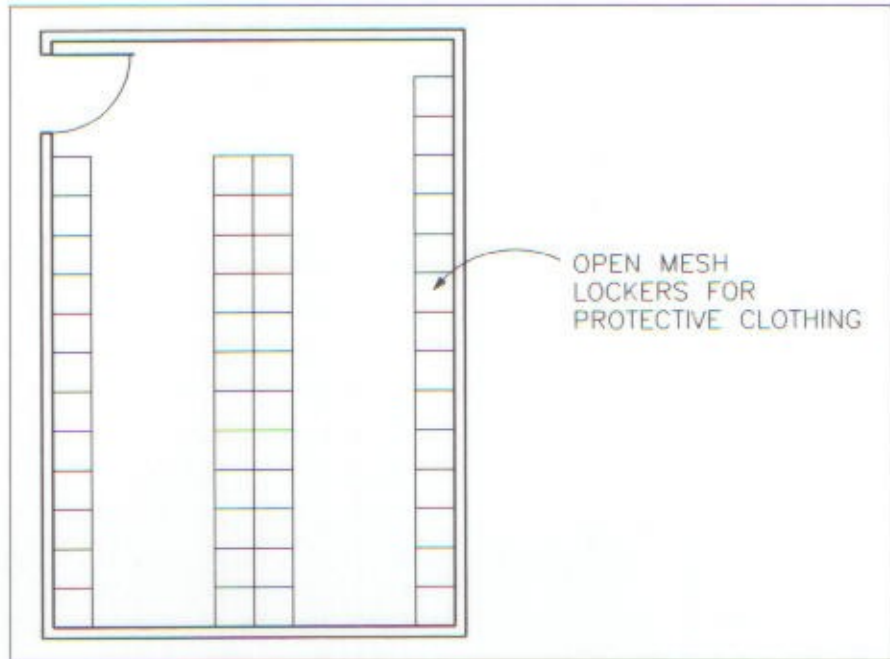


Figure 4-W: Protective clothing lockers



Wire mesh lockers permit free air circulation, keeping the fire fighters protective clothing ready for any emergency.

9. Protective Clothing Laundry

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Equipment must accommodate washing 4 to 10 sets of bunkers at one time.

b. Furnishings and Equipment

- ◆ Provide an 8-foot by 4-foot stainless steel work table to test hazardous material suits for leaks.
- ◆ Provide a compartmental stainless steel sink and a drip dry rack.
- ◆ Provide two industrial washers/dryers for protective clothing.
- ◆ Provide stainless steel hanging tub for scrubbing down the personnel protection equipment per NFPA.

c. Technical Requirements

- ◆ Specify non-porous fixtures and finishes, and stainless steel equipment.
- ◆ Provide an oil/water separator for waste water from washers, sinks, and floor drains.
- ◆ Provide spray nozzle to wash down rubber suits.
- ◆ Provide compressed air hose to blow up rubber suits.
- ◆ Room requires negative air pressure for gases emitted while protective clothing is stored.
- ◆ Provide access to apparatus room or exterior entrance to protective clothing laundry, so contaminated garments are not brought into the fire station.
- ◆ Provide HVAC make-up air interconnected to dryer operations.

10. Outdoor Tire Storage

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide covered outdoor space for one tire/wheel for each authorized vehicle.

b. Furnishings and Equipment

- ◆ Provide tire rack or tire wheel wells to store tires in vertical position.

c. Technical Requirements

- ◆ Provide access to storage areas from interior and exterior of station.
- ◆ Provide visual screening for outside storage area.

11. General Storage

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.

b. Furnishings and Equipment

- ◆ Heavy-duty shelving for supplies.
 - ◆ Provide desk, chair and file cabinets.
- ### c. Technical Requirements
- ◆ Provide lockable door.
 - ◆ Provide access from interior and exterior of station.
 - ◆ Provide adjacent square footage to handle the volume of stock items.
 - ◆ Provide telecommunications and computer outlets as required.



Figure 4-X: Protective clothing laundry



Provide an enclosure wall and gate to screen outdoor storage from public view.

12. Medical Storage

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.

b. Furnishings and Equipment

- ◆ Provide open steel shelving for gowns, gloves, and other emergency medical supplies.

c. Technical Requirements

- ◆ Comply with NFPA requirements.
- ◆ Provide lockable door.

13. Janitor's Closet

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide one janitor's closet in the living area of the station.

b. Furnishings and Equipment

- ◆ Floor-mounted mop sink.
- ◆ Shelving for janitorial supplies.
- ◆ Hooks for cleaning and maintenance equipment storage.

c. Technical Requirements

- ◆ Provide hot and cold water for mop sink.
- ◆ Do not locate electric panels in janitor's closet.
- ◆ Provide a water-resistant, easily maintained floor material, sloped to a floor drain.

**14. Mechanical/
Electrical/Telephone/
Compressor Room**

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.

b. Furnishings and Equipment

- ◆ Requirements include the following:
 - A generator
 - Air compressor equipment
 - Hot water heat (dual with rapid reheat)

- Forced air conditioning system
- Electrical panels
- Fire-suppression system control
- ◆ Telephone switch and panels
- c. Technical Requirements**
- ◆ Locate diesel fuel outside of building.
- ◆ Include sufficient utility system redundancy to allow for equipment maintenance and contingencies for 24-hour-a-day operations.
- ◆ Do not air condition the mechanical room.
- ◆ STC rating – 47 to 52, depending on the adjacent use.
- ◆ Provide a 1-hour rated enclosure if combustible fuel is used in the mechanical room.
- ◆ Provide a lockable door, entered from the outside.
- ◆ Slope floor toward floor drain.
- ◆ Provide concrete pad or other vibration isolation mass for air compressor, if required.
- ◆ Provide exterior access.

15. Public and Private Corridors

a. Size and Critical Dimensions

- ◆ Refer to Tables 5-A or 5-B for space sizes.
- ◆ Provide 6-foot-wide public main corridors.
- ◆ Provide 4-foot-wide private corridors.
- ◆ Circulation should be approximately 25 percent of the total space excluding the apparatus room.
- ◆ Exterior wall space should not exceed 7 percent of the total space.

b. Furnishings and Equipment

- ◆ Not applicable

c. Technical Requirements

- ◆ Doors from sleeping areas, training room, dining room and recreation rooms should swing outward, but not restrict the width of the corridor.
- ◆ All corridor doors leading toward the apparatus room should swing in the direction of travel.

16. Disinfecting Facilities

a. Size and Critical Dimensions

- ◆ Fire departments that provide basic life support and advanced life support emergency medical services are authorized one disinfecting area within the fire station. Each base is required to have one disinfecting area. Refer to table 5-A for space size.
- ◆ Locate disinfecting area adjoining

the protective clothing laundry room.

b. Furnishings and Equipment

- ◆ Provide stainless steel equipment and fixtures including triple-container sink, rack shelving, and a work counter.

c. Technical Requirements

- ◆ Room must comply with NFPA 1581.

I. U.S. Air Force Reserve/Air National Guard

1. Primary Design Considerations

a. Use and Performance

- ◆ These spaces are separately funded by the Reserve and Air National Guard.
- ◆ **AFRES/ANG Fire Chief's Office** – Provide a private office.

- ◆ **AFRES/ANG Assistant Fire Chief's Office** – Provide a private office.
- ◆ **AFRES/ANG Protective Clothing Lockers** – Lockers for fire fighting clothing only.

b. Space Organization and Character

- ◆ The space should have a business-like character.
- ◆ Reserve chief officer's locker space may be added to the fire chief officer's bedroom and shower (provided it is separately funded by the reserve and guard units).

c. Relationship Between Spaces

- ◆ Locate the AFRES/ANG office and protective clothing lockers in a separate wing of the large fire station.
- ◆ If both the AFRES and ANG are at the same base, separate facilities are required for both; each is separately funded.

2. AFRES/ANG Fire Chief's Office

a. Size and Critical Dimensions

- ◆ Refer to Table 5-A for space size.
- ◆ Locate all AFRES/ANG offices and locker space in a single fire station for unit integrity.

b. Furnishings and Equipment

- ◆ Provide a desk, chair, credenza, guest chairs and bookcase.

c. Technical Requirements

- ◆ Provide a lockable door.
- ◆ Provide a minimum STC rating of 35 in the walls.
- ◆ Provide telecommunications and computer outlets as required.

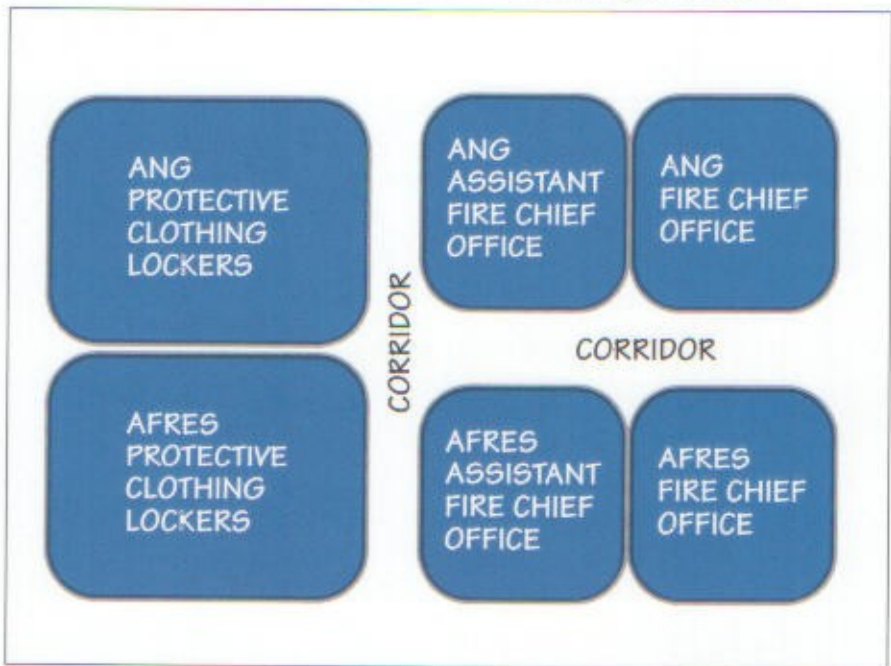


Figure 4-Y: AFRES/ANG functional area relationships

3. AFRES/ANG Assistant Fire Chief's Office

- a. **Size and Critical Dimensions**
 - ◆ Refer to Table 5-A for space size.
- b. **Furnishing and Equipment**
 - ◆ Furnish with a desk, office chair, credenza, bookcase and guest chair.
- c. **Technical Requirements**
 - ◆ Provide a minimum STC rating of 35 in the walls.
 - ◆ Provide lockable door.
 - ◆ Provide telecommunications and computer outlets as required.

4. AFRES/ANG Protective Clothing Lockers

- a. **Size and Critical Dimensions**
 - ◆ Refer to Table 5-A for space size.
 - ◆ Separate locker space is provided for fire protection teams assigned to active Air Force installations. All reserve locker space will be located in a single fire station for unit integrity. Locker space is authorized for Individual Mobility Augmentee type positions.
 - ◆ Provide 6 net square feet per authorized person for protective clothing locker space. (Provide a room or mezzanine at existing stations; new stations should include a locker room.)

b. Furnishings and Equipment

- ◆ Provide open wire mesh metal lockers sized 18 inches wide by 18 inches deep by 6 feet high.
- ◆ Protective clothing includes jacket, pants, boot hoods, and SCBA.
- ◆ Should have shelves, clothes hooks, and integral combination lock handle.

c. Technical Requirements

- ◆ Requires negative pressure in room for gases emitted while protective clothing is stored.
- ◆ Reserve locker space for fire fighting clothes. Not for storage of civilian clothes.
- ◆ Design lockers to permit free air circulation around and through clothing. When enclosed lockers are used, the front and sides must be of an open design. ■



AFRES/ANG protective clothing lockers should permit free air circulation around and through clothing, including jacket, pants, boot hoods, and SCBA.



Select a site large enough to provide adequate space for exterior functions and vehicles, taking into account the frontage onto the flight line.



The number and type of fire fighting vehicles housed at each station are determined by the type of aircraft they support and the fire flow demand required to extinguish structural fires.

Chapter 5

Illustrative Designs

A. Introduction

This chapter presents illustrative designs for fire stations based on example space criteria for hypothetical bases and sites. The criteria represent typical local operations and space requirements, with realistic architectural solutions that might be appropriate for an individual Air Force base.

The illustrative designs and space requirements are not definitive building layouts. Each base should develop its own space criteria and design solution appropriate to local functions, operating patterns, size requirements, site constraints, and desired architectural character.

Large Fire Station Administration Personnel	
Fire Chief	1
Asst. Fire Chiefs	4
Alarm Communications Center Operators	5
Technical Services	2
Administrative Assistant	1
Total	13

B. Example Large Fire Station

1. Design Statement

The large fire station typically is the fire department's primary facility. For purposes of the illustrative design, shown in large fire station plan Figure 5-A and Space Criteria Table 5-A, the total personnel is 63, comprised of a maximum of 13 people on an 8-hour shift and a maximum of 25 people on each of two 24-hour shifts. This total is calculated by multiplying the 24-hour manpower requirement by the Air Force fire protection manpower factor of 2.58.

The building houses twelve vehicles requiring six drive-through stalls.

Large Fire Station Fire Fighting Personnel		
Vehicle No.	No. on Crew	Job Description
P-2	3	Crew chief, Driver, Lineman
P-2	3	Crew chief, Driver, Lineman
P-10	3	Crew chief, Driver, Crew Member
P-15	3	Crew chief, Driver, Lineman
P-19	3	Crew chief, Driver, Lineman
P-22	4	Crew chief, Driver, 2 Firefighters
Total No. of crew	19 x 2.58 = 50 (to obtain total no. of firefighters for shifts)	

Small Fire Station Fire Fighting Personnel		
Vehicle No.	No. on Crew	Job Description
P-22	4	Crew Chief, Driver, 2 Firefighters
Total No. of Crew	4 x 2.58 = 11 (to obtain total no. of firefighters for shift)	

C. Example Small Fire Station

1. Design Statement

Small fire stations are required when vehicle response time cannot be achieved from a large fire station.

For purposes of the illustrative design, as shown in Figure 5-B and Space Criteria Table 5-B, the total number of personnel at the fire station is 11, which includes four people on each of two 24-hour shifts. This figure is calculated by multiplying the 24-hour manpower requirement by the Air Force fire protection manpower factor of 2.58.

The building houses two vehicles that require two drive-through stalls.

Example Large Fire Station Space Criteria

Based on 63 persons and 12 vehicles

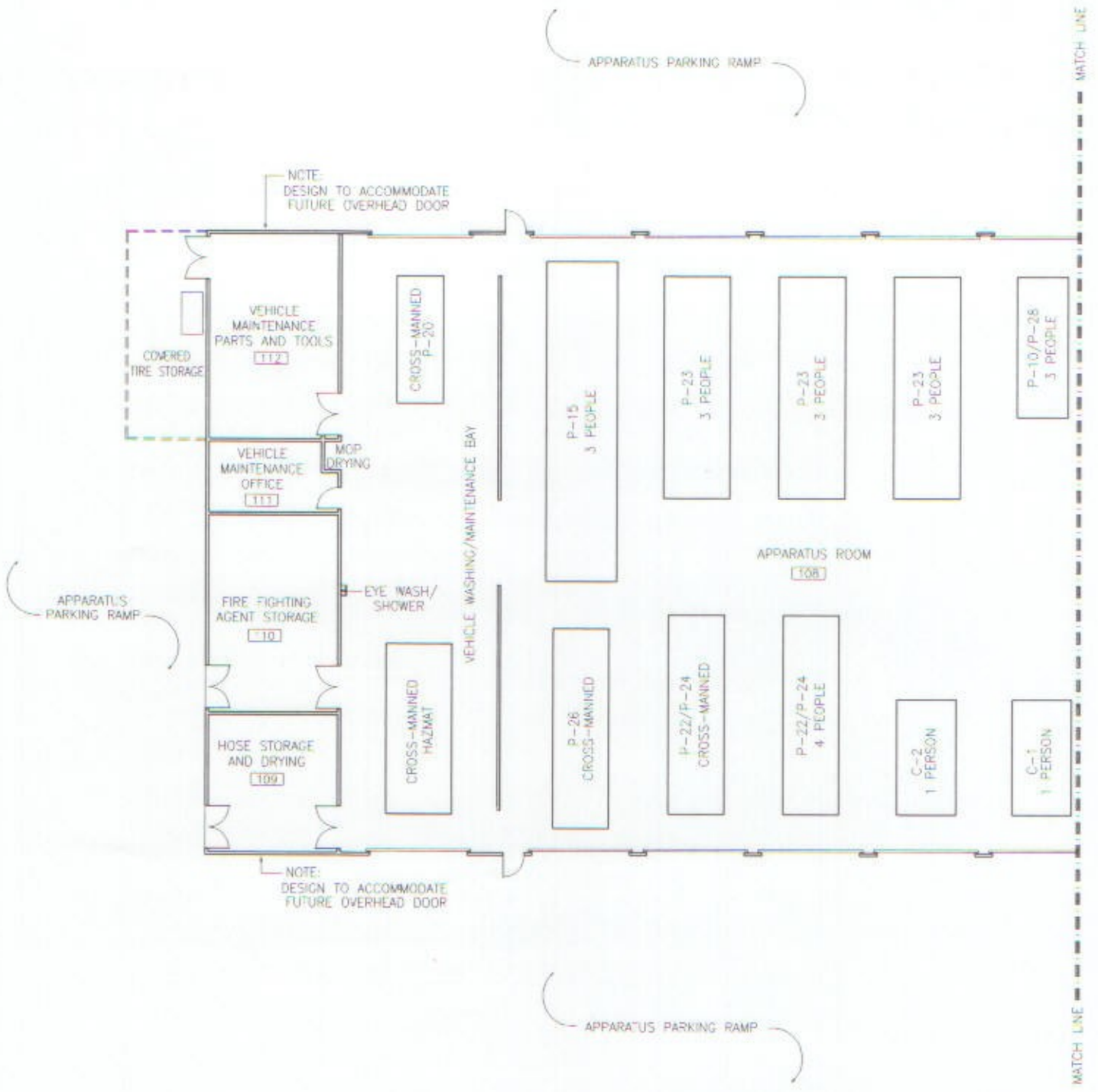
Component	Net SF
Alarm Communications Center	
Communications Control Room.....	400 SF
Kitchenette.....	70 SF
Private Rest Room.....	80 SF
Emergency Response Center.....	320 SF
Telecommunications/Computer Room.....	200 SF
Subtotal Alarm Communications Center:	1,070 SF
Apparatus Room	
Six Bays/Twelve Vehicles.....	9,780 SF
Subtotal Apparatus Room:	9,780 SF
Training Facilities	
Training Room.....	680 SF
Assistant Chief for Training Office.....	130 SF
Audiovisual Storage.....	240 SF
Fire Fighting Computer Simulation Model.....	100 SF
Testing/Training.....	100 SF
Physical Fitness.....	750 SF
Subtotal Training Facilities:	2,000 SF
Living Quarters	
Private Bedrooms (110 SF per bedroom).....	2,420 SF
Personal Lockers.....	540 SF
Physical Therapy Room.....	230 SF
Rest Rooms/Shower.....	700 SF
Laundry.....	260 SF
Subtotal Living Quarters:	4,150 SF
Recreation/Dining	
Television Room.....	570 SF
Day Room.....	480 SF
Vending.....	50 SF
Kitchen.....	200 SF
Kitchen Storage.....	50 SF
Serving Line.....	100 SF
Dining Area.....	360 SF
Subtotal Recreation/Dining:	1,810 SF

Example Large Fire Station Space Criteria
Based on 63 persons and 12 vehicles

Component	Net SF
Administration	
Vestibule.....	80 SF
Entrance/Reception	380 SF
Fire Chief's Office	230 SF
Fire Chief's Conference Room.....	130 SF
Fire Chief's Bedroom.....	130 SF
Deputy Fire Chief's Office.....	130 SF
Assistant Chief for Operations' Office.....	130 SF
Assistant Chief for Operations' Bedroom.....	160 SF
Rest Room	150 SF
Station Captain's Office/Bedroom.....	170 SF
Assistant Chief for Technical Services' Office.....	130 SF
Technical Services Staff Office	130 SF
Technical Services Aids and Storage	50 SF
Administration Storage.....	30 SF
Administration Open Office.....	150 SF
Copy	50 SF
Coats.....	30 SF
Subtotal Administration Areas:	2,260 SF
Maintenance, Repair, Storage and Support	
Vehicle Maintenance Office.....	150 SF
Vehicle Maintenance Parts and Tools.....	430 SF
Fire Fighting Agent Storage.....	300 SF
Hose Storage and Drying	250 SF
Fire Extinguisher Maintenance/Repair and Storage.....	660 SF
SCBA Maintenance and Repair.....	520 SF
Protective Clothing Lockers.....	340 SF
Protective Clothing Laundry	600 SF
Outdoor Tire Storage.....	220 SF
Outdoor Fire Extinguisher Storage	500 SF
Outdoor Mechanical Equipment Enclosure	510 SF
General Supply.....	440 SF
Medical Storage.....	220 SF
Janitor's Closet	50 SF
Mechanical/Electrical/Telephone/Compressor Room.....	360 SF
Public and Private Corridors (25% excluding Apparatus Room)	3,820 SF
Disinfecting Facilities (include with the protective clothing laundry room)	150 SF
Subtotal Maintenance, Repair, Storage and Support:	8,290 SF
AFRES/ANG	
AFRES/ANG Fire Chief's Office.....	230 SF
AFRES/ANG Assistant Fire Chief's Office.....	130 SF
AFRES/ANG Protective Clothing Lockers	300 SF
Subtotal AFRES/ANG:	660 SF**
Total Large Fire Station	30,170 SF

*Outdoor area not included **Optional if funded by AFRES/ANG

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50 Figure 5-A

FIRE STATION FACILITIES DESIGN GUIDE



LARGE FIRE STATION PLAN



Figure 5-A (Corr'd.)

Example Small Fire Station Space Criteria

Based on 11 persons and 2 vehicles

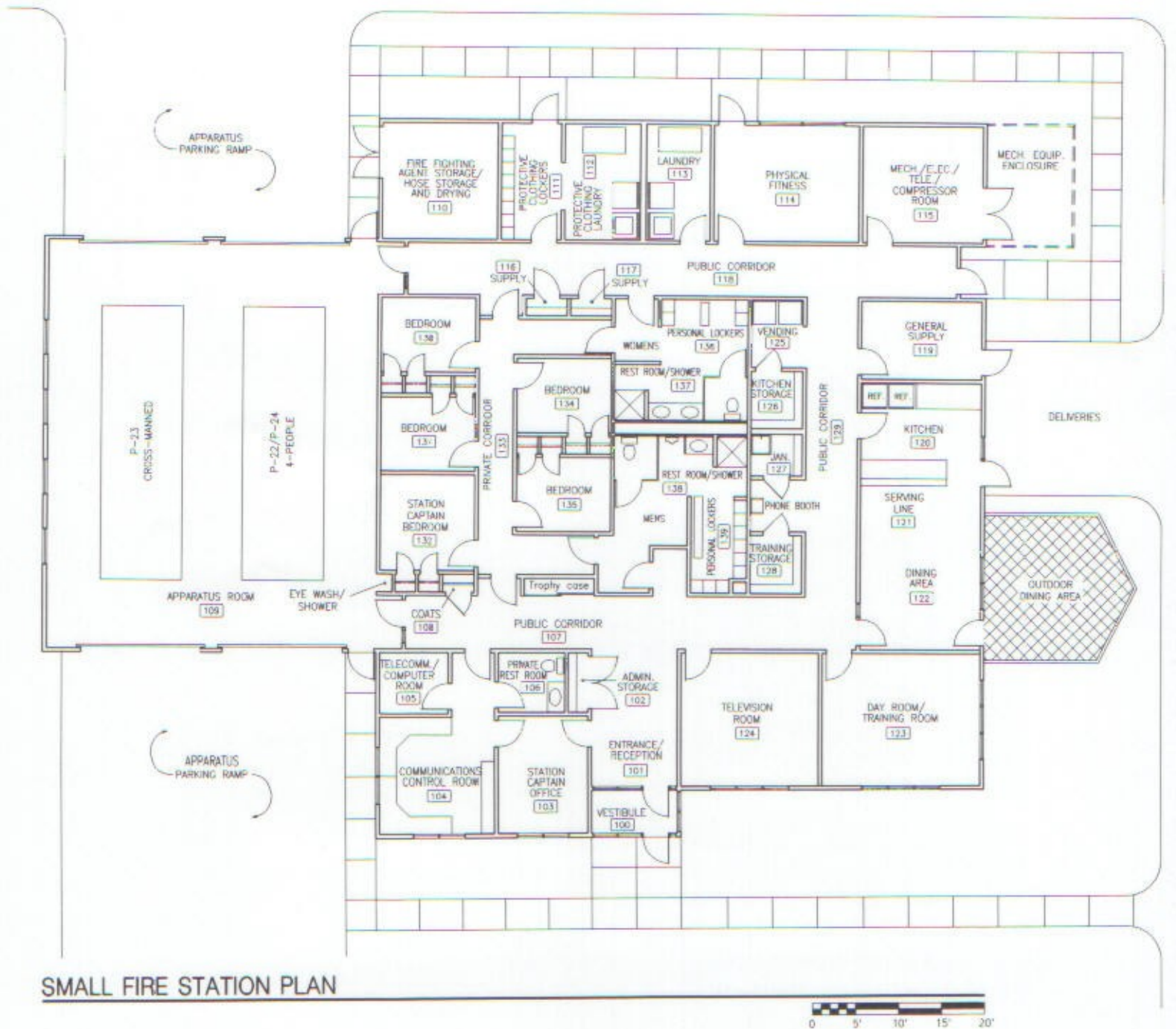
Component	Net SF
Alarm Communications Center	
Communications Control Room.....	200 SF
Private Rest Room.....	60 SF
Telecommunications/Computer Room.....	50 SF
Subtotal Alarm Communications Center:	310 SF
Apparatus Room	
Two Bays/Two Vehicles.....	1,830 SF
Subtotal Apparatus Room:	1,830 SF
Training Facilities	
Training Room included in the Day Room.....	0 SF
Physical Fitness.....	220 SF
Subtotal Training Facilities:	220 SF
Living Quarters	
Private Bedrooms.....	440 SF
Station Captain's Bedroom.....	130 SF
Personal Lockers.....	230 SF
Rest Rooms/Shower.....	300 SF
Laundry.....	100 SF
Subtotal Living Quarters:	1,200 SF

Example Small Fire Station Space Criteria

Based on 11 persons and 2 vehicles

Component	Net SF
Recreation/Dining	
Television Room	260 SF
Day Room/Training Room	260 SF
Vending	20 SF
Kitchen	160 SF
Kitchen Storage	50 SF
Serving Line	100 SF
Dining Area	150 SF
Subtotal Recreation/Dining:	1,000 SF
Administration	
Vestibule	60 SF
Entrance/Reception	200 SF
Station Captain's Office	130 SF
Administration Storage	40 SF
Training Storage	60 SF
Coats	10 SF
Subtotal Administration:	500 SF
Maintenance, Repair, Storage and Support	
Fire Fighting Agent Storage and Hose Storage and Drying	180 SF
Protective Clothing Lockers	100 SF
Protective Clothing Laundry	120 SF
General Supply	190 SF
Janitor's Closet	30 SF
Supply Closet	20 SF
Mechanical/Electrical/Telephone/Compressor Room	150 SF
Public and Private Corridor (25% excluding Apparatus Room)	970 SF
Subtotal Maintenance, Repair, Storage and Support:	1,760 SF
Total Small Fire Station	6,820 SF

FIRE STATION FACILITIES DESIGN GUIDE



SMALL FIRE STATION PLAN

Chapter 6

Interior Finishes

A. General

Finish materials and furnishings should be selected through the use of professional interior design services. Selections should be based on anticipated use, maintenance qualities, life-cycle cost, fire and other life safety requirements, as well as aesthetic qualities. Coordinate materials, finish, color, and texture selections to complement the overall building design and image. Select colors and finishes to express professionalism, warmth, and a strong, positive image. Select local materials to the greatest extent practical. Ensure that carpets and other finish materials comply with applicable criteria.

B. Colors and Finishes

Use colors and finishes of surface materials to highlight and differentiate spaces. For example, the maintenance area requires extremely durable and easy to maintain finishes. See Finish Schedule, Table 6 A. One example of typical finish board is included in this chapter. The designer should consider environmental and climate issues when selecting a color scheme.

Permanent and semi-permanent surface materials such as tile, carpet, and the majority of the wallcoverings

should be in neutral color tones. Accent colors can be used on surfaces that can be easily changed.

Floor Covering - Seven flooring choices are available, depending on the finish required.

Vinyl Composition Tile - Use in service, janitorial and maintenance areas, and other high-soil areas. Benefits are ease of maintenance and durability.

Porcelain Tile - Use in high-maintenance areas where extreme durability is required, and where water and moisture are present. Can be used for both indoor and outdoor projects.

Ceramic Tile - Use in areas where water and moisture are present, such as rest rooms and break rooms. Provides ease of maintenance and durability.

Carpet Tile (Main) - For general use wherever carpet is required. It is easy to install, and the overall pattern conceals stains and traffic wear. Provides easy replacement, storage, and flexibility.

Carpet Tile (Static Resistant) - Use in telecommunications or computer rooms.

Carpet Tile (Border) - Use as an accent in public areas, such as hallways and reception rooms, or

wherever a definition of space is required.

Broadloom Carpet - Use in offices, conference rooms and dining area.

Base - Standard vinyl base will be used throughout most projects. It provides ease of maintenance and durability.

Acoustical Wallcovering - Use AWC-1 as an overall wallcovering; i.e., in telecommunications/computer room and fitness room where additional acoustical treatment is desired.

Vinyl Wallcovering - Two choices of covering are available.

VWC-1 - Use as an overall wallcovering; i.e., in private corridors, offices, training rooms and recreation areas where an upgraded finish is desired.

VWC-2 - Use as an overall wallcovering; e.g., in public corridors, vending, dining areas and main reception areas where there is public traffic and more durability is required.

Mini Blinds - Can be used in all projects where window treatment is required. Use one color to provide an overall uniform appearance.

Paint - Where ease of maintenance is necessary, and drywall/vinyl covering are not options, paint is recommended. Each scheme has two color choices.

Overall Paint Color (A & B) - Select one color to use on walls, columns, and doors. Use semigloss paint at door frames and trim.

Ceiling Tile - Use 2' by 2' standard system.

Base standards should be established for plumbing, electrical, and mechanical fixture selections.

Understated excellence is the standard. Extravagant accessories must be avoided. Keep selections simple to maintain continuity.

C. Furniture

Furniture is an integral part of the overall building design and image. Coordinate furniture selection for consistency with finish materials, textures, and colors of architectural elements.

Choose furniture that is durable, comfortable, and flexible. Systems furniture, which can be funded as part of the MILCON program, is recommended for all administrative areas.

D. Finish Schedule

Table 6-A shows the large fire station finish schedule, including the floor, base, walls, and ceiling finishes. Functional areas for the small fire station are indicated with asterisks.

E. Color Boards

Figure 6-B shows sample colors and finishes for a typical fire station. These sample colors and finishes are intended to show level of quality and cohesiveness of design. Other manufacturer's products of equal value may be substituted.



Fire station interior design should coordinate materials, finish, color, and texture selections to complement the overall building design and image. Colors and finishes should reflect professionalism, warmth, and a strong, positive image.

D.Finish Schedule - Large Fire Station

Room No.	Functional Area Name	Floor	Base	Walls	Ceiling	Notes Pg. 59
100	Vestibule*	PED-1	VB-1	VWC-2	ACT-1	6
101	Entrance/Reception*	CPT-2	VB-2	VWC-2	ACT-1	
102	Asst. Chief for Training Office	CPT-3	VB-1	PT-1	ACT-1	
103	Training Room*	CPT-3	VB-1	VWC-1	ACT-1	
104	Audiovisual Storage	CPT-3	VB-1	PT-1	ACT-1	
105	Testing/Training	CPT-3	VB-1	PT-1	ACT-1	
106	Fire Fighting Computer Simulation Model	CPT-3	VB-1	PT-1	ACT-1	
107	Public Corridor*	CPT-1	VB-1	VWC-2	ACT-1	
108	Apparatus Room*	CONC	N/A	PT-3	EXP	7
109	Hose Storage and Drying*	CONC	N/A	PT-3	EXP	7
110	Fire Fighting Agent Storage*	CONC	N/A	PT-3	EXP	7
111	Vehicle Maintenance Office	VCT-1	VB-2	PT-1	AT-1	
112	Vehicle Maintenance Parts & Tools	CONC.	N/A	PT-3	EXP	7
113	Communications Control Room*	CPT-1	VB-1	PT-1	ACT-1	
113A	Kitchenette	VCT-1	VB-2	PT-1	ACT-1	
114	Telecommunications/Computer Room*	CPT-2	VB-1	AWC-1	ACT-1	
115	Private Rest Room*	CT-1	CT-1	PT-3	PT-4	1,3
116	Emergency Response Center	CPT-2	VB-1	PT-1	ACT-1	
117	SCBA Maintenance and Repair	VCT-1	VB-2	PT-1	ACT-1	
118	Fire Extinguisher Maintenance/ Repair and Storage	VCT-1	VB-2	PT-1	ACT-1	
119	Mech./Elec./Tele./Comp. Room*	CONC.	VB-2	PT-1	EXP	
120	Public Corridor*	VCT-1	VB-2	VWC-2	ACT-1	
121	Protective Clothing Laundry*	PRT-1	PRT-1	PT-3	PT-4	1
122	Laundry*	PRT-1	PRT-1	PT-3	ACT-1	1
123	Private Corridor	PRT-1	PRT-1	VWC-1	ACT-1	
124	Physical Therapy Room	PRT-1	PRT-1	PT-3	PT-4	1
125	Physical Fitness*	MAT-1	VB-2	AWC-1/MR-1	ACT-1	2
126	Medical Storage	CONC	VB-2	PT-1	EXP	
127	Janitor's Closet*	CONC	VB-2	PT-1	EXP	
128	Public Corridor*	VCT-1	VB-2	VWC-2	ACT-1	

Table 6-A: Finish Schedule *Rooms which are included in the small fire station

D.Finish Schedule - Large Fire Station

Room No.	Functional Area Name	Floor	Base	Walls	Ceiling	Notes Pg. 59
129	General Supply*	CONC	VB-2	PT-1	EXP	
130	Kitchen*	PRT-1	PRT-1	PT-3	PT-4	1
131	Kitchen Storage*	PRT-1	PRT-1	PT-1	PT-4	
132	Dining Area*	CPT-3	VB-1	VWC-2	ACT-1	
132A	Serving Line*	PRT-1	PRT-1	VWC-2	ACT-1	5
133	Day Room*	CPT-3	VB-1	VWC-1	ACT-1	
134	Television Room*	CPT-3	VB-1	VWC-1	ACT-1	
135	Deputy Fire Chief's Office	CPT-3	VB-1	VWC-1	ACT-1	
136	Fire Chief's Conference Room	CPT-3	VB-1	VWC-1	ACT-1	
137	Fire Chief's Office	CPT-3	VB-1	VWC-1	ACT-1	
138	Fire Chief's Bedroom	CPT-3	VB-1	PT-1	ACT-1	
139	Rest Room	CT-1	CT-1	CT-2	PT-4	1,3,4
140	Assistant Chief for Operations' Bedroom	CPT-3	VB-1	PT-1	ACT-1	
141	Assistant Chief for Operations' Office	CPT-3	VB-1	PT-1	ACT-1	
142	Public Corridor*	CPT-1	VB-1	VWC-2	ACT-1	
143	Technical Services Staff Office	CPT-3	VB-1	PT-1	ACT-1	
144	Asst. Chief for Tech. Services' Office	CPT-3	VB-1	PT-1	ACT-1	
145	Administration Storage*	CPT-3	VB-1	PT-1	ACT-1	
146	Coats*	CPT-3	VB-1	PT-1	ACT-1	
147	Administration Open Office	CPT-2	VB-1	VWC-2	ACT-1	
148	Technical Services Aids and Storage	CPT-3	VB-1	PT-1	ACT-1	
149	Vending*	VCT-1	VB-2	VWC-2	ACT-1	
150	Copy	CPT-2	VB-1	VWC-2	ACT-1	
151	Station Captain's Office/Bedroom*	CPT-3	VB-1	VWC-1	ACT-1	8
152	Protective Clothing Lockers*	VCT-1	VB-2	PT-1	PT-4	1
153	Private Corridors*	CPT-1	VB-1	VWC-2	ACT-1	
154-175	Private Bedrooms*	CPT-3	VB-1	PT-1	ACT-1	
176	Private Corridor*	CPT-1	VB-1	VWC-1	ACT-1	
177	Personal Lockers*	CT-1	CT-1	CT-2	PT-4	1,3,4
178	Rest Rooms/Showers*	CT-1	CT-1	CT-2	PT-4	1,3,4
179	Rest Rooms/Showers*	CT-1	CT-1	CT-2	PT-4	1,3,4
180	Personal Lockers*	CT-1	CT-1	CT-2	PT-4	1,3,4

*Rooms which are included in the small fire station

Table 6-A (Cont'd.)

Finish Schedule Key Notes:

1. Provide water-resistant gypsum board ceiling and walls.
2. Provide a full-length mirror on two walls and acoustical wallcovering on the other walls.
3. Provide separate color schemes for each rest room/shower area.
4. Provide ceramic wall tile to the ceiling.
5. Provide porcelain tile a minimum of 3 feet in front of the serving line.
6. Exterior building materials may be introduced into the vestibule.
7. Provide wall construction of concrete masonry units.
8. The station captain's office and bedroom are separate functional areas in the small fire station.

Finish Schedule Abbreviations:

ACT-1	2 x 2 acoustical ceiling tile
AWC-1	acoustical wallcovering
CONC.	sealed concrete
CPT-1	static resistant carpet tile
CPT-2	regular carpet tile
CPT-3	broadloom carpet
CT-1	ceramic floor tile and coved base
CT-2	ceramic wall tile
EXP	exposed structure
MAT-1	interlocking exercise mat
MR-1	full-length mirror
PED-1	recessed walk-off ped mat
PRT-1	porcelain floor tile and base
PT-1	flat latex paint
PT-3	epoxy paint
PT-4	ceiling white epoxy paint
VB-1	4" straight vinyl base
VB-2	4" covered vinyl base
VCT-1	vinyl composition tile
VWC-1	vinyl wallcovering type 1
VWC-2	vinyl wallcovering type 2

E. Color Boards

Floor and Base



CPT-1:
Carpet Tile
(CPT-1 Static Resistant)
Manufacturer: Lee's
Name: MBH Collection
DQ586
Number: Fairway 501



CPT-2:
CPT-3:
Broadloom Carpet
Manufacturer: Lee's
Name: Presence LH86Z
Number: 5077 Persian Peacock



VCT-1:
Vinyl Composition Tile
Manufacturer: Armstrong
Name: Polychrome White
Number: 51974



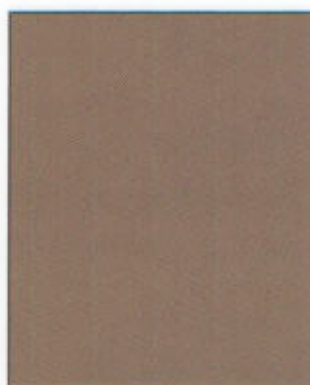
PRT-1:
Porcelain Floor Tile
Manufacturer: Innovative
Ceramics, Inc.
Name: Exceed Porcelain
Ceramic
Number: 531 Lapis Lazzulo



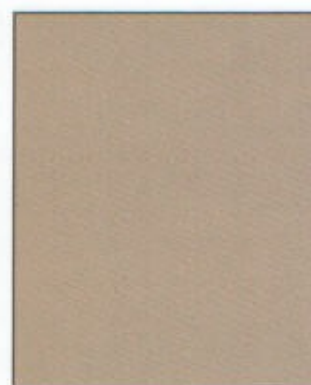
CT-1:
Ceramic Floor Tile - Field
Manufacturer: American
Olean
Name: Empire Gray
Number: C-17, 2x2 tile



CT-1:
Ceramic Floor Tile - Border
Manufacturer: American
Olean
Name: Sterling Silver
Number: A32, 1x1 tile



CT-1:
Ceramic Floor Tile - Border
Manufacturer: American
Olean
Name: Dawn Gray
Number: A-10, 1x1 tile



VB-1 and VB-2:
Vinyl Base
Manufacturer: Kentile
Name: Cloud
Number: 212

Figure 6-B: Color Boards

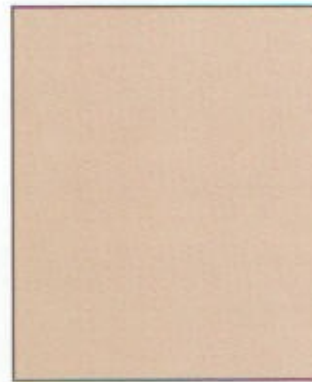
Ceiling and Walls



ACT-1:
Acoustical Ceiling Tile
Manufacturer: Armstrong
Name: Second Look II
Number: 2767B



PT-1, 2, 3:
Paint A (Color Choice One)
Manufacturer: Benjamin
Moore
Number: 1548



PT-1, 2, 3:
Paint B (Color Choice Two)
Manufacturer: Benjamin
Moore
Number: 1541



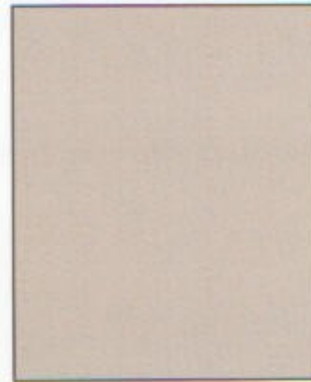
AWC-1:
Acoustical Wallcovering
Manufacturer: J.M. Lynne Co.
Name: Trax Trx
Number: 842-MICA



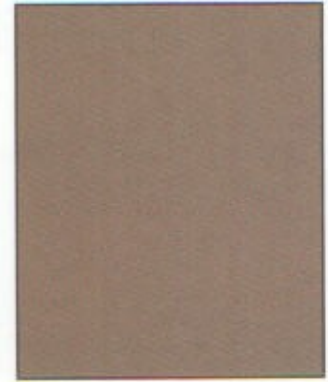
VWC-1:
Vinyl Wallcovering
Manufacturer: Gilford
Name: Supersonic
Number: WSD 3739



VWC-2:
Vinyl Wallcovering
Manufacturer: Gilford
Name: End of the Line
Number: TNT 1979



CT-2:
Ceramic Wall Tile - Field
Manufacturer: American
Olean
Name: Lite Sterling
Number: Y-62, 2x2 tile



CT-2:
Ceramic Wall Tile - Accent
Manufacturer: American
Olean
Name: Gloss Gray
Number: Y-75, 2x2 tile

PT-4: Ceiling White (not shown)

Figure 6-B: Color Boards (Cont'd.)

General References

Air Force Category Code 730-142	Fire Stations	AFR 86-5	Planning Criteria for Waivers for Airfield Support Facilities	BOCA	Building Officials and Code Administrators
AFI 32-1024	Air Force Instruction for Facility Design and Construction Standard Facility Requirements	AFR 86-14	Airfield and Helicopter Planning Criteria	DD Form 1391	Military Construction Project Data
AFM 88-43	Installation Design	AFR 89-1	Design and Construction Management	DoD 4270.1M	Construction Criteria Manual
AFP 86-10	Landscape Planning and Design	AFR 125-37	Protection of USAF Resources	DoDI 6055.6	Department of Defense Fire Protection Program
AFP 88-40	Sign Standards	AFR 127-100	Explosives Safety Standard	MIL-HDBK-1190	Military Building Code
AFP 88-41	Interior Design	AFR 161-35	Hazardous Noise Exposure	MIL-HDBK-1008B	Military Handbook-Fire Protection for Facilities Engineering, Design, and Construction
AFR 18-1	Air Force Energy Management	AMC ETL 93-2	Dormitory Criteria for Humid Areas		
AFR 19-9	Interagency and Intergovernmental Coordination of Land, Facility, and Environmental Plans, Programs, and Projects	ANSI A117.1	Specifications for Making Buildings and Facilities Accessible to and Usable by the Physically Handicapped	NFPA	National Fire Protection Association

NFPA 13	Standard for Sprinkler Systems	NFPA 1500	Standard for Fire Department Occupational Safety and Health Program
NFPA 17A	Standard for Wet Chemical Extinguishing Systems	NFPA 1581	Standard for Fire Department Infection Control Program
NFPA 72	Standard for Fire Protection Signaling Systems	Table of Allowance 012	US Air Force Vehicle Allowance Document
NFPA 72E	Standard for Automatic Fire Detectors	USPH, PHS	Publication 934, Food Service Manual
NFPA 96	Standard for Installation of Equipment for the Removal of Smoke and Grease Laden Vapors		AMC Commanders' Guide to Facility Excellence
NFPA 403	Standard for Aircraft Rescue and Fire Fighting Services at Airports		The Air Force Pricing Guide Base Architectural Compatibility Guide



**“THE DESIRE TO SERVE,
THE ABILITY TO PERFORM,
THE COURAGE TO ACT .”**



Prepared by



**Air Combat Command and
Air Mobility Command
Directorates of Civil Engineering
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