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Manual of Naval Preventive Medicine

Chapter 2

SANITATION OF LIVING SPACES AND RELATED SERVICE FACILITIES

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Chapter 2

SANITATION OF LIVING SPACES AND RELATED SERVICE FACILITIES

Section I. Sanitation of Living Spaces

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2-1. Scope.

1. Whenever people live or work in a close proximity, the possibility of adverse health conditions, e.g., respiratory disease transmission, is magnified. In addition, human comfort during rest or recreation has a direct bearing on morale.

2. Design plays an important role in eliminating potentially adverse health conditions in existing facilities. Cleanliness contributes to morale and is aesthetically desirable.

2-2. Habitability.

1. A habitable and healthful environment must prevail in living and berthing spaces ashore and afloat to maintain the efficiency of Navy and Marine Corps Personnel. To this end, construction plans for both ships and shore stations are under constant review to ensure that the latest developments in human factors engineering are incorporated into facility/ship design.

2. Major factors which pertain to living, recreation, and berthing ashore and afloat include: floor area, ventilation, heating, sanitary fixtures, water supply, lighting and color.

3. Current manuals and publications must be consulted for specific data on the above requirements and allowances. However, it must be realized that due to demands for combat effectiveness, minimum standards for sanitary facilities are not always attainable. In these circumstances, commanding officers must strive to achieve, within practicable limits, the minimum standards necessary to optimize sanitation.

2-3. Construction Standards.

1. The Department of Defense Construction Manual, DoD 4270.1M, contains technical criteria and policy guidance for design and construction of berthing facilities ashore. Detailed design criteria procedures must be consistent with guidance provided in this document. Renovation of existing structures must be undertaken in conjunction with the medical department to ensure that health and sanitation standards are incorporated at the earliest design phase of the project.

2. Berthing compartment construction or modification aboard ship must be consistent with the standards established in *General Specifications for Ships of the U.S. Navy (GenSpec).*

2-4. Berthing Aboard Ships and Barges.

1. The executive officer, medical officer or medical department representative, the OOD, JOOD, chief master at arms, division officer, and division chief petty officers must make

routine inspections of the sanitary condition of toilets, lavatories, and berthing spaces.

2. Berthing spaces must be clean at all times, well ventilated, and well illuminated. Head-to-foot sleeping arrangements for occupants of adjacent beds are recommended to reduce the potential of airborne disease transmission unless privacy curtains are installed at each bunk.

3. Except for instances of operational necessity, hot bunking is prohibited. The use of polyurethane pillows aboard ship is prohibited. Minimum requirements for pillows aboard ships are outlined in *Federal Specification V-P-356D.* Mattresses must conform to Military Specification MIL-M-18351. Mattress foam inserts must be "low smoke" foam rubber per Military Specification MIL-R-20092.

4. A sufficient supply of clean bed linen must be maintained. Bedding must be changed frequently to prevent odor accumulation.

5. Water closets, urinals, lavatories, and showers, must be clean and operable. Shower curtains, mats, bulkheads, and decks must be cleaned and sanitized at sufficient intervals to prevent mildew, odor, and soap accumulations. Sewage backflow through deck drains and overflowing water closets constitute extremely unsanitary conditions. If these conditions occur, the space or unit must be immediately secured until the situation is corrected and the spaces are cleaned and sanitized.

2-5. Bachelor Quarters

1. Department heads, division officers, and division leading petty officers must make routine inspections of enlisted berthing spaces in order to maintain Navy standards of sanitation. It is mandatory that the building petty officer (BPO) accompany all inspecting parties in their area of responsibility and be familiar with standard room entry procedures outlined in OPNAVINST 11103.1A.

2. With the exception of guide dogs for the blind and military working dogs, no dogs, cats or similar pets are allowed in berthing areas. Permission to maintain other animals as pets, such as fish, is the option of the commanding officer.

3. Berthing areas that are not air conditioned must have screened windows and self closing doors. All spaces must be well ventilated, illuminated, and heated to meet local weather conditions.

4. All head facilities and common areas must be cleaned daily.

5. Hot water must be delivered to the user at temperatures not to exceed 110° F in buildings with laundry and shower facilities. Hot water must be delivered at a temperature not to exceed 100° F in buildings without laundry or showers, e.g., duty rooms.

6. Complaints of unsanitary conditions existing in unaccompanied personnel housing must be investigated and promptly resolved by the BQ management.

7. Living space standards for each grade are found in the current NAVPERS 15606, Navy Bachelor Quarters Manual. The information is reproduced in Table 2-1.

2-6. Temporary Lodging Facilities.

1. Temporary lodging facilities are those that are intended for use for short periods of time, such as awaiting permanent housing, transfer, and at recreational areas where housing, such as cabins are available.

2. With the exception of guide dogs for the blind and military working dogs, dogs, cats, birds, or similar pets are prohibited in spaces intended for human occupancy. Permission to allow other types of pets is the option of the commanding officer.

3. Temporary lodging facilities must be cleaned thoroughly after each occupancy. Dishes, pots and pans, blankets and bedding must be inspected for cleanliness prior to occupancy. Periodic inspections of these facilities must be made by medical department personnel in conjunction with the facility

Table 2-1. Bachelor Quarters Standards of Adequacy for Reporting Purposes

Grade	Transient Personnel	Permanent Party Personnel and PCS Students
Civilians	250 square feet net living area; private room; bath shared with not more than one other.	See NAVPERS 15606, Navy Bachelor Quarters Manual for equivalent grades.
03 — 010		400 square feet net living area, living room, bedroom, and private bath; access to kitchen or officers' dining facility receiving appropriated fund support
01 — 02, W1 — W4		250 square feet net living area; sleeping/living room private bath.
E7 — E9	250 square feet net living area; private room; bath shared with not more than one other	270 square feet net living area, private room and bath
E5 — E6	135 square feet net living area; no more than two to a room; bath shared with not more than one other	
E1 — E4 (other than recruits/"A" School)	90 square feet net living area; room configured or open bay space; not more than four to a room except in open bay; central bath.	90 square feet net living area; not more than four to a room; central bath.
E1 — E4 "A" School	72 square feet net living area; semi-open bay; central bath.	
E1 Recruits	72 Square feet net living area; open bay; central bath.	

1. Rooms will be measured per the guidance in Appendix D of NAVPERS 15606, Navy Bachelor Quarters Manual.
2. For BQs not described in 1 above, request assistance from your major claimant and your public works officer.

manager. These inspections may only be conducted while individual units are vacant, unless conditions warrant otherwise. Cleaning gear must be readily available for use by patrons on a day-to-day basis. Facilities for pets should be made available adjacent to the lodging facility. When such facilities are available, it is each pet owner's responsibility to ensure that their animal does not become a sanitary nuisance.

2-7. Berthing for Watch Standers.

1. Most commands have responsibilities which require individuals to remain overnight, such as: fire fighters, communications personnel, and other watch standers. The minimum requirements for the watch room are as follows:

a. Each person must be furnished with two clean sheets and a pillow case. In no case will a person be required to use the same linen that has been used by another person (hot bunking).

b. Common use mattresses and pillows must be protected from staining by body discharges by the use of mattress and pillow covers.

c. The entire areas, including the heads, must be cleaned daily. Beds, nightstands, and other common use equipment should be cleaned on a weekly basis.

d. Supervisory personnel are tasked with ensuring that optimum sanitary standards are maintained at all times.

2-8. Civilian Contract Berthing.

1. Whenever contracts are let for berthing of military personnel in a non-military facility; e.g., civilian shipyards, such housing must meet the sanitary standards for unaccompanied personnel housing as set forth in this chapter. In no case will this housing be approved until a medical officer and supply officer, or their appointed representatives inspect such housing and furnish their findings to the commanding officer. It is recommended that preventive medicine personnel accompany command representatives during the course of their inspections.

2. Contract berthing inspections must include, but not be limited to, an evaluation of the facility location in relation to an industrial area and messing facilities. Administrative consideration should be given to means of transportation to and from the work site, recreational facilities, laundry, and other personnel support facilities. If the contract berthing facility is located near the industrial site, noise levels must be determined, and walking routes evaluated to ensure there is adequate lighting and that no safety hazards exist to impede pedestrian traffic or cause injury.

3. The initial inspection should be conducted during normal working hours and once again at night to identify any unique conditions which may exist.

2-9. Preventive Medicine Inspections.

1. Medical Department personnel with preventive medicine responsibilities must conduct inspections at least quarterly.

2. It is recommended that whenever possible medical department personnel conduct their inspections in conjunction with command inspections.

3. Inspection reports which identify discrepancies and offer recommendations for corrective action must be provided to responsible personnel.

2-10. Confinement Facilities/Ashore and Afloat.

1. Afloat

a. Medical department personnel must report any unsanitary or unhealthy conditions, observed during daily sick call, to the commanding officer (per OPNAVINST 1640.9.

b. The ship's brig, if present, must be

included with the quarterly habitability inspection of living spaces.

c. Cell dimensions and sanitary facilities must conform to standards promulgated by Naval Sea Systems Command. Ventilation, heating, and illumination standards must conform to those of the crew's living spaces. For detailed information concerning shipboard detention facilities, refer to the General Specifications for Ships of the U.S. Navy and OPNAVINST 1640.8 series, Manual for the Administration of Afloat Brigs.

2. Ashore

a. SECNAVINST 1640.9A requires a daily sanitation inspection by the brig staff and a weekly inspection by a medical department representative to ensure that cleaning and maintenance procedures are being carried out. A copy of the weekly inspection must be retained in the brig records.

b. A quarterly sanitation/habitability inspection of brigs ashore must also be conducted by preventive medicine personnel.

c. Sanitary standards must conform to those standards outlined in SECNAVINST 1640.9 series, Department of the Navy Corrections Manual, DoD Construction Criteria Manual, and other Department of Defense instructions.

Section II. BARBER AND BEAUTY SHOP SANITATION

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2-11. General.

Barbershops and beauty shops are operated within the jurisdiction of the Navy and Marine Corps for convenience and to enable personnel to maintain a neat appearance at minimum expense. Although these shops are seldom incriminated in the spread of disease, the potential exists if they are not operated in a sanitary manner. The following information constitutes minimum requirements for promulgating barbershop and beauty shop regulations.

2-12. Employees

1. Employees of barbershops and beauty shops must adhere to the following physical and personal hygiene requirements.

a. All barber and beauty shop employees, including personnel employed by a civilian contract, must be medically screened and determined to be free of communicable disease prior to their initial assignment. Unless required by local medical departments for specific reasons, such as indigenous labor, subsequent health screening, e.g., annual

evaluation is not routinely required. The local medical officer may delegate this responsibility to non-physician civilian or military personnel, e.g., environmental health officers, physician assistants, preventive medicine technicians, independent duty corpsmen, civilian nurses, and civilian environmental health technicians. The medical screening must be sufficiently comprehensive to detect acute or chronic diseases that may be transmitted by direct or indirect contact during the performance of their services. Depending upon the prevalence of communicable diseases in the geographical location, local medical officers may order specific testing they consider necessary. Barber and beauty shop employees may be screened by local military medical departments or they may present documentary evidence, acceptable to the local medical authority, that a complete and thorough medical screening has been accomplished.

b. Barbershop and beauty shop employees must maintain good personal hygiene when attending patrons. Hands must be thoroughly washed with soap and warm water:

(1) between patrons.

(2) after touching inanimate objects that are likely to be contaminated.

(3) before leaving the shop.

c. Special care should be taken to avoid injuring the hands. Chapped, inflamed, or cut skin can allow bacteria and viruses to enter the bloodstream.

d. Wardrobe. A clean smock or other freshly laundered over garment must be worn while attending patrons.

2-13. Sanitation Requirements.

1. Barbershops/beauty shops are not to be located in food service or berthing areas. Barbershops/beauty shops may be located within BOQs and BEQs and officer and enlisted clubs; a separate room is required.

2. An adequate supply of hot and cold running water, with proper lavatory fixtures and waste disposal must be provided.

3. The interior of barber/beauty shops must be adequately lighted and ventilated.

4. Shops must be maintained in a clean condition.

2-14. Construction Standards for Barbershops and Beauty Shops Ashore and Afloat.

1. The Department of Defense Construction Criteria Manual, DoD Instruction 4270.1-M, outlines the space allowance and construction standards for barbershops and beauty shops ashore.

2. Afloat, the determination as to number and type of barber facilities, including female requirements, is outlined in OPNAVINST 9640.1 series, Shipboard Habitability Program.

2-15. Sanitary Practices.

1. Only Food and Drug Administration (FDA) approved tonics, lotions, bleaches, dyes, etc., are permitted in barbershops/beauty shops. Only Environmental Protection Agency (EPA) registered disinfectants or sanitizing agents are acceptable in Navy and Marine Corps Facilities. Questionable or unlabeled products must be referred to the medical department for determination of suitability.

2. Therapeutic practices, such as treating pimples, ingrown hair, etc., are prohibited.

3. The treatment of eye conditions is prohibited.

4. The headrest of barber chairs must be covered with a clean towel or a clean sheet of paper for each patron.

5. Common brushes, dusters, etc., are prohibited.

6. Because of the theoretical possibility for the transmission of bloodborne pathogens, e.g., Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV), the practice of shaving is no longer permitted in Navy and Marine Corps barbershops and beauty shops. Therefore, the use of razors or disposable razors is prohibited.

7. Individual sanitary neck strips must be used for each patron.

8. Covering cloths must be changed daily or as often as necessary to ensure cleanliness.

9. Operator's street clothing must be stored separately from that of patrons.

10.Barbershops or beauty shop employees are not permitted to eat, drink, or smoke while attending patrons.

11. Clean, covered sanitary receptacles must be provided for waste materials and used linen. Receptacles should be lined with disposable bags.

12. The removal of cut hair from decks must be done frequently by dustless methods. Floors must be washed with detergent and water at frequent intervals to prevent the accumulation of dirt.

13. When compressed air is used to remove hair from patrons, the pressure must be 15 pounds per square inch or less.

2-16. Cleaning and Disinfection of Instruments.

1. All instruments, metallic and non-metallic, in contact with patrons must be cleaned and disinfected between each patron. Cuticle nippers, nail clippers, combs, brushes, clipper heads and all other instruments must be thoroughly washed with soap or detergent and hot water to remove all film, oil, and debris after use on each patron. Following cleaning, the instruments must then be placed in an EPA-registered disinfecting solution. Due to the patron load at some facilities, the solutions may require changing on a daily basis, while other facilities may not require this frequency. The label and Material Safety Data Sheet (MSDS) must be consulted for directions and information concerning handling and use precautions. Unless otherwise indicated by the label, all disinfecting solutions must be changed at least weekly. The medical department representative (preventive medicine service) will determine the frequency for changing solutions. All instruments disinfected in a chemical solution must be thoroughly rinsed in running potable water to remove the chemical prior to use.

2. Non-removable clipper heads must be wiped or dusted and sprayed with an EPA-registered disinfecting spray between each patron. The spray must be used with caution. Precautions include minimum use of material (consistent with proper disinfection), directing the spray away from the breathing zone of the user and any patrons in the vicinity of the procedure, minimizing skin contact, and adequate hand washing after use. Material Safety Data Sheets (MSDS) for the spray being used and container labels must also be consulted for information concerning handling and use precautions. Removable clipper heads may be disinfected with the spray or the heads may be removed and placed in a disinfecting solution as prescribed for other instruments in Paragraph 1, above.

3. Formaldehyde cabinets and ultraviolet light are not acceptable methods of disinfection in Navy and Marine Corps barbershops and beauty shops.

4. Quantity of Instruments. Adequate numbers of instruments and supplies must be available to accomplish disinfection. The following number of instruments per operator are recommended for an average shop.

a. Clipper heads (blades). Three sets of three, each set containing one size each of 000, 1, and 1-1/2.

b. Seven combs of various design.

c. Three pairs of scissors.

d. Two pairs of thinning shears.

e. Two flattop brushes.

f. Three hundred hair rollers with clips.

g. Fifteen styling brushes.

2-17. Abnormal Skin Conditions.

Serving patrons with inflamed or infectious conditions of the scalp, face, or neck without the written consent of the medical officer is prohibited.

2-18. Regulations/Inspections.

1. Each barbershop or beauty shop must post a copy of these sanitary regulations in a conspicuous place. Operators are expected to read, understand, and comply with these requirements. In overseas locations, translation of the sanitation regulations into the host-nation language should be accomplished.

2. Inspection of barbershops and beauty shops must be conducted at least quarterly by medical department personnel.

Section III. Trailer Home/Recreation Vehicle (RV) Camp Grounds and Mobile Home Court Sanitation

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2-19. General.

The health of trailer home/recreation vehicle and mobile home occupants, as well as residents of adjoining communities, is endangered if the facilities are not operated and maintained in a sanitary manner. The medical officer (or designated representative), must keep the commanding officer informed as to the status of sanitation. This section serves as minimum sanitary requirements for the operation of trailer/recreational vehicle camp grounds and mobile home courts. Significant variation is often encountered in local ordinances in the areas of space limitations, site selection, water supply, and sewage disposal. State and local regulations must always be consulted to ensure compliance. Safety professionals should be consulted on a regular and as needed basis to help determine adequacy of foundation systems, fuel supply, electrical, and life and fire safety considerations.

2-20. Definitions.

1. Mobile Home. A permanent dwelling. It has kitchen facilities, flush toilets, and a bath or shower.

2. Recreation Vehicle. A self-propelled and self-contained dwelling intended for temporary occupancy.

3. Trailer Home. A vehicle drawn by an automobile or truck; intended for temporary occupancy. It may or may not be equipped with toilet and bath facilities.

4. Recreational Vehicle/Trailer Home Campground. Sights for overnight or short-term parking. It has facilities available for sanitary drop, potable water, and service buildings with bath and laundry facilities.

5. Mobile Home Court. An area of ground upon which two or more mobile homes, occupied for dwelling are located.

6. Mobile Home Space. A plot of ground within a mobile home court designed to accommodate one mobile home.

7. Service Building(s). A building housing toilet and bathing facilities for males and females with laundry or other services that may be required.

2-21. Site Selection and Considerations.

1. Courts or campgrounds must not be located adjacent to swamps, marshes, heavy industrial zones, or other areas where objectionable odors, noise, or other adverse conditions would expose individuals to health hazards. The area must have good natural drainage or a storm drainage system. The drainage must not endanger any water supply. Wherever possible, the mobile home court or campground should be connected to public water and sewerage systems.

2. The area of the mobile home park or campground must be sufficient to accommodate the number of mobile home or recreational vehicle spaces for which the court was intended. It must have adequate parking spaces for motor vehicles and access roads and walkways. Service and recreation areas must be free of traffic hazards, easily accessible to all park residents, and meet the population requirements the park or campground is designed to accommodate.

2-22. Space Limitations.

1. Mobile Home Court. Space limitations are primarily governed by local regulation. These local regulations must be consulted before proceeding in the planning or construction of a mobile home park. In general, each independent mobile home space must contain a minimum of 2800 square feet and be at least 40 feet wide. A minimum of 4500 square feet must be available for double wide units. Every mobile home space must abut a driveway or other clear area with unobstructed access to the public street. Mobile homes must be parked in spaces so that there will be a minimum of 15 feet between mobile homes (side to side, end to end, or end to side) and so that no mobile home is less than 10 feet from the exterior boundary of the mobile home park.

2. Recreational Vehicle Campgrounds. Local regulations must be considered. In general, a recreational vehicle site must contain a minimum of 1000 square feet, not including roads and streets. All recreational vehicles must be located at least 25 feet from any park boundary line abutting a public street or highway, and at least 15 feet from any other property lines.

2-23. Recreation Areas.

Recreation areas and facilities must be provided to the extent that they are considered necessary to meet the population of the park. Because of the various age groups represented, two or more separate recreation areas are recommended for larger mobile home courts. Recreation areas must be located in easily accessible areas that are free of traffic hazards.

2-24. Service Buildings.

1. A trailer home or RV campground must provide one or more service buildings. Service buildings must be of substantial construction and equipped with flush type fixtures. One service building for every 20

units is recommended for parks or campgrounds intended for trailer homes or recreational vehicles. One service building for every 100 units is recommended in mobile home courts for use as an emergency sanitary facility. These buildings must contain no less than two toilets for females, one toilet and one urinal for males, one laundry tray, two lavatories and a shower with hot and cold running water for each sex. Showers may be located in several service buildings, or one centrally located shower building. When toilet facilities for males and females are located in the same building, they must be completely separated by a partition. In any case, service buildings must be located within 500 feet of the sites served.

2. Laundry facilities and adequate drying space must be provided for every 20 trailers.

3. Standards for service buildings:

a. Permanent construction provided with adequate light, heat, and ventilation.

b. Interior of moisture-resistant material to permit frequent washing and cleaning; floor impervious to water, easily cleanable, and sloped to floor drains connected to the sewage system.

c. Effective screening of all openings.

d. Sanitary maintenance at all times.

e. Hard surfaced and well marked walkways to permit easy access to the service building from all spaces.

2-25. Water Supply.

1. Mobile home courts and RV campgrounds must be supplied with a safe water supply under pressure. The source and distribution system must be satisfactorily constructed and approved by the State, (in the U.S. or territories) or Naval Facilities Engineering Command and the Bureau of Medicine and Surgery in overseas locations. Water must comply with all the requirements of the Safe Drinking Water Act (National Primary Drinking Water Regulations). A sufficient amount of hot and cold water must be available at all times in service buildings. The source should be capable of supplying at least 150 gallons per mobile home space per day.

2. In mobile home courts, potable water must be provided at each site. An individual water connection must be provided at an appropriate location at each trailer space. The water connection must consist of a riser terminating at least 12-18 inches above the ground surface, with two 3/4 inch valved outlets. The connection must be located at least 10 feet from the sewer connection and be equipped with a backflow prevention device. The potable water outlets must be capped when not connected to a trailer.

2-26. Sewage and Liquid Waste Disposal.

1. A vertical drainpipe with at least a 3-inch connection to the sanitary sewer must be provided at each site in mobile home courts. It is desirable that the connector be a non-collapsible, flexible hose, 3 inches in diameter, and 4 to 5 feet in length. The connection must be equipped with a suitable trap which is located below the frost line. The vertical drainpipes must be securely covered when not in use. The sewer connection must be protected against "wheel damage" by a curb or concrete collar at least 3 inches deep and extending 12 inches from the connection in all directions. The sewer connection must be provided with suitable fittings to permit a watertight junction to be made with the trailer outlet. The connection between the mobile home drain and the sewer must be watertight and self draining. The connection between the vertical drain and trailer must be made in such a manner to exclude insects and rodents, prevent leakage and the escape of odors, and prevent other health hazards or nuisances.

2. Water from toilets, showers, and lavatories must be discharged into an approved public or private sewage system.

3. Mobile home courts are high density communities. Because of this, when a court is to be opened or expanded, special consideration must be given to ensuring that the environmental impact of any proposed sewage treatment system is considered and/or the capacity of an existing system is adequate.

4. A sanitary or dump station must be provided at RV campgrounds for the disposal of sewage and other liquid wastes. It must consist, as a minimum, of a trapped 4-inch sewer riser pipe connected to an approved sewage disposal system. The riser must be surrounded by a concrete apron sloped to the drain. It must have a suitable hinged cover or screw cap and a water outlet to permit periodic wash down of adjacent areas.

7-27. Refuse Disposal.

1. All refuse must be stored in durable, fly-tight, and rodent-proof containers. Refuse containers must be clean, sanitary, and maintained in good repair. Sufficient capacity must be provided to prevent overflowing of any container between collections.

2. All refuse must be collected at least weekly.

3. The burning of trash and refuse is prohibited.

2-28. Insect and Rodent Control.

1. Mobile home parks and RV campgrounds must be periodically inspected by medical department personnel to identify harborage areas or breeding sites for rodents and insect vectors.

2. An effective pest management plan must be in place to eliminate insect breeding sites and/or rodent harborages in and around these locations (see Chapter 8).

2-29. Pets.

1. Pets may be allowed in the mobile home park or RV campground area depending on local command policy. If pets are permitted, they must be under rigorous control at all times. At no time are pets allowed to run loose, nor will they be allowed to create a nuisance or health problem. Pet owners are responsible for cleanup and removal of feces.

2. All pets will be required to have proof of vaccination and registration as required by local regulations.

2-30. Inspections.

1. Inspections of the mobile home courts/campgrounds area must be routinely conducted by management personnel to identify conditions which require preventive maintenance or other corrective action.

2. The medical officer or his/her designated representative must inspect at least quarterly. A report of the conditions observed must be forwarded to the commanding officer, the manager of the mobile home court/campground, and other personnel as appropriate. Emphasis must be placed on health and sanitation. Specific consideration should be paid to conditions which may impact on water quality, insect and rodent control, and nuisance, or other health related conditions.

Section IV. LAUNDRY AND DRY CLEANING

Article
General ---- 2-31
Employees ---- 2-32
Sanitary Requirements ---- 2-33
Hospital/Health Care Facility Laundry ---- 2-34
Hygienically Safe Laundry ---- 2-35
Industrial Hygiene and Safety ---- 2-36

2-31. General.

The purpose of a laundry or dry cleaners is to produce clean garments. Establishments for washing, drying, and dry cleaning range from hand laundries to highly mechanized plants. Sanitary or industrial hazards may occur at any point in the process from delivery of contaminated clothing to the finished product.

2-32. Employees.

1. Employees of laundry and dry cleaning establishments must adhere to the following requirements:

a. Personnel exposed to dry cleaning solvents must receive pre-employment and periodic physical examinations on a schedule determined by the medical officer or higher authority.

b. Personnel working in the processing area of laundries or dry cleaning plants must wear clean, washable outer garments in lieu of street clothing.

c. Personal hygiene must be stressed. Frequent hand washing, particularly after visiting the toilet or handling soiled linen, is mandatory.

2-33. Sanitary Requirements.

1. Laundry and dry cleaning premises must be maintained in a clean and sanitary condition, free from infestation by rodents and insects.

2. Floors must be cleaned at least once daily by dustless methods. Paper and trash must be placed in covered containers; lint must be removed as necessary from bulkheads, overheads, and structural supports.

3. Plumbing fixtures and appliances must be installed in accordance with established standards, maintained in good repair, and kept in a sanitary condition. These fixtures and appliances must be connected to prevent backflow or cross-connections with the potable water supply. Shipboard washing machines have the ability to utilize both fresh water or seawater connections. Fresh and sea water connections must be made in accordance with Naval Ships' Technical Manual, Chapter 655. Sea water may be used when the ship is outside the 50-fathom curve, or 25 miles from shore but never when the ship is in polluted water.

4. Sanitary angle jet type water fountains must be provided to supply drinking water.

5. Adequate toilet facilities with a shower and ample locker space must be provided and maintained in a sanitary condition. A sign stating **"Wash Hands Before Leaving"** must be prominently displayed in all toilet areas.

6. Eating, cooking, smoking, or storage of food, drinks, or smoking material is prohibited in rooms where clothing is handled, sorted, marked, washed, or dry cleaned. If meals or lunches are eaten on the premises, a separate room or space, approved by the medical department, must be provided for this purpose.

7. Laundries and dry cleaning plants must have separate areas designated for receiving and issue. Unwashed clothes must never be received, sorted, marked, or handled in close proximity to washed clothes.

8. Rooms or spaces must be designed and machines and equipment arranged so that a separate flow of clean and soiled garments is maintained throughout the laundry or cleaning process. This flow requires separate contact surfaces, such as tables, carts, shelves, etc. Ventilation must move air from clean to soiled areas to prevent cross contamination.

9. Vehicles and containers used for transportation and storage of laundry and dry cleaning must be kept clean and in a sanitary condition.

10. When present, laundries and dry cleaning plants must be inspected quarterly.

2-34. Hospital/Health Care Facility Laundry.

1. Linen management is included in the standards established by the Joint Commission on Accreditation of Health Care Organizations. Proper linen management is probably best satisfied in Naval Hospitals through a joint effort of the Infection Control Committee, the Preventive Medicine Service, and laundry supervisory personnel. Hospitals/medical facilities using commercial linen services are not relieved of the responsibility for establishing adequate quality assurance procedures.

2. Several aspects of the normal laundering process (hot water wash, bleach, and ironing) reduce the chance of survival of pathogenic microorganisms. Linen handling in hospitals/medical facilities is critical because of the potential for bacterial contamination from infected patients. The recommended method of handling soiled linen is through the use of individual impervious laundry bags for each area. Linen carts must be lined with washable material that can be removed and replaced easily. Linen must only be sorted in the laundry sorting room. Sorting must be done prior to washing by trained personnel wearing clean uniforms, masks, and gloves. Sharp objects, such as broken glass, surgical instruments, etc., are sometimes inadvertently placed in soiled linen. These objects must be carefully removed by sorting personnel. If not removed, the objects may damage machinery and linen.

3. Contaminated laundry from isolated rooms, surgical cases, etc., is often received by laundries. When this occurs, special precautions are required and personnel must be specifically trained on procedures and potential health implications of handling contaminated articles. Contaminated linen must be received in impervious, well sealed double bags. The outer bag must be labeled with the universal biohazard symbol or the word "Biohazard" or be red in color. The inner bag must be hot water soluble. Contaminated linen must not be sorted.

2-35. Hygienically Safe Laundry.

1. Normally, articles to be laundered are exposed to hot water at 160° F containing alkalies, detergents, and/or other chemical cleaning agents. The laundry process is followed by a series of rinses and machine drying.

2. Recent studies indicate that hygienically safe laundry can be processed with warm water laundry formulations (not containing chlorine bleach) at temperatures of 120° to 140° F. Hot air dryers are a necessary step when chlorine bleach is not included in the formulation. The Centers for Disease Prevention and Control concurs. The BUMED requirement to add a disinfecting agent (chlorine bleach) to warm water (120°-140° F) laundry formulations is hereby rescinded.

3. Laundered articles must be rendered sufficiently free of animal, chemical, and bacterial substances or other materials that may be harmful to persons handling or wearing such articles.

2-36. Industrial Hygiene and Safety

1. Workrooms associated with laundry and dry cleaning operations where machinery or apparatus emit steam, vapors, or heat must be properly ventilated. Such spaces/operations must be provided with general and/or local exhaust ventilation in order to reduce and/or maintain personnel exposure to potentially hazardous materials/agents within permissible exposure levels. Clean, tempered replacement (or supply) air should be provided. The ventilation system of all dry cleaning equipment must be designed to automatically draw air into the machine upon opening the loading door, thus preventing the release of vapors into the work area. Any proposed changes/modifications to the ventilation system must be referred to the local medical department industrial hygienist for review.

2. All steam and hot water pipes must be insulated with approved (non-asbestos) lagging.

3. Adequate lighting levels must be provided in accordance with appropriate illumination guidelines.

4. When the air concentration of dry cleaning materials exceeds permissible exposure levels, appropriate control measures must be initiated, i.e., administrative, engineering and/or personnel protective equipment. In the event of accidental spills, the proper personal protective equipment, to include respiratory protection, gloves, and apron must, be worn during cleanup operations.

5. Machinery producing potentially hazardous noise/vibration levels must be identified and proper corrective measures initiated. Personnel exposed to sound pressure levels greater than 84 dBA (decibels-A scale) must wear proper hearing protection devices and receive periodic audiometric testing and/or evaluation.

6. Eye protection (safety glasses, goggles, face shields, etc.) is required in operations where splashes may occur such as replenishment of dry cleaning fluid, or the addition of bleaches and detergents. An emergency eye wash station must be provided within the work area.

7. Automatic safety devices on all equipment must be clearly identified, properly maintained, and must not be removed or bypassed.

8. Guardrails must be constructed in connection with ironers, compressors, and other dangerous equipment. Drive shafts, exposed belts, and gears must be enclosed.

9. Signs must be conspicuously posted to warn unauthorized personnel to stay clear of dangerous or restricted areas.

10. First aid kits for emergency use must be provided as required by applicable Occupational Safety and Health Administration (OSHA) regulations.

11. Slippery floors or decks and cluttered aisles are prohibited.

12. Only properly trained personnel may operate flat work ironing machines.

13. Training must be provided in safety, first aid, and use of personal protective equipment.

14. Storage of hazardous and flammable materials used in laundry and dry cleaning processes must be in accordance with current directives.

15. Fire regulations must be prominently displayed and enforced.

Section V. CHILDREN'S PLAYGROUNDS

Article
General ---------- 2-37
Site Requirements ---------- 2-38
Playground Equipment ---------- 2-39

2-37. General.

Playgrounds are typically located at schools, child care centers, picnic areas, and in family housing. Sustained accident prevention requires careful planning and continued vigilance to ensure that playgrounds remain free of hazards. Playgrounds must be inspected quarterly by medical department personnel with preventive medicine responsibilities. Complete information and requirements concerning the operation of playgrounds is found in OPNAVINST 1700.9C.

2-38. Site Requirements.

1. The site must be reasonably leveled and drained to obtain dryness a maximum number of days in the year. The site should not be completely shaded.

2. It must be free of stone outcroppings, gullies, drop-offs, stumps, weeds, animal waste, and trash.

3. Play areas must be fenced to prevent small children from wandering into roadways or other dangerous sites, such as abandoned wells, ravines, or bodies of water.

4. Walkways must be constructed of gravel, concrete, or other suitable materials.

5. If present, trash receptacles must be covered.

6. Energy absorbing surfacing, such as wood chips, sand, shredded tires (non-steel belted), or pebbles, must be used under swings, jungle gyms, slides, and other equipment.

2-39. Playground Equipment.

When playground equipment is provided it must be located away from natural pathways of traffic. Steps leading up to slides must have handrails. There should be guards on seesaws to prevent boards from hitting the ground. Swings offer special hazards which can be minimized by using seats of light-weight material, such as belting, rubber or heavy canvas. Bolts and screws with rounded surfaces must be used in construction of playground equipment. The equipment should have supports of galvanized or painted metal and be firmly anchored in concrete. Concrete anchors must be sufficiently embedded in the soil to preclude them from becoming a trip or fall hazard. Equipment that is improperly installed, rusted, badly worn, or otherwise deteriorated must be repaired or replaced. Playground equipment must be carefully selected and properly placed for the age group for which it is intended. Sufficient space should be allowed between play areas so that children may move freely and safely from one area to another.

Section VI. CAMPGROUNDS AND PICNIC AREAS

Article
General ---------- 2-40
Site Selection ---------- 2-41
Water Safety ---------- 2-42
Water Supply ---------- 2-43
Refuse Disposal ---------- 2-44
Comfort Stations ---------- 2-45

2-40. General.

When resources are developed for camping and picnicking, adequate facilities to protect the health and safety of patrons must be provided. Campgrounds and picnic areas must be inspected on a quarterly basis.

2-41. Site Selection.

Campgrounds and picnic sites must be located in such a manner as to protect the areas needed for water-shed, range, and other basic resources. A well drained, gently sloping area is preferred. Sites should be free of rock outcrops and heavy undergrowth. Weeds should be regularly cut to prevent coarse stubble from developing and to reduce insect, snake, and small animal hazards.

2-42. Water Safety.

Campgrounds and picnic areas are frequently located near a body of water. When this is the case, disease, injury prevention, and water safety measures must be taken into consideration. Chapter 4 of this manual should be consulted when a swimming pool or natural bathing place is present.

2-43. Water Supply.

An adequate supply of safe drinking water must be provided at campgrounds and picnic areas. Water hydrant stations with non-threaded, self-closing faucets must be provided within 150 feet of a campsite and individual picnic sites. The area around water hydrants must be properly drained to prevent standing water. In locations where a water system is not possible, a portable water source must be provided at a central pick-up station. Non-potable water systems must be adequately identified to prevent consumption. Campers must also be warned of the dangers in using a stream, lake, or spring as a source of drinking water. If temporary facilities are provided for pop-up trailers and recreational vehicles, adequate potable water and sewage facilities must be provided.

2-44. Refuse Disposal.

Durable, waterproof and rodent proof containers must be provided for refuse disposal. Refuse containers must be located within 150 feet of any campsite. They should be located near access roads to ease refuse collection. Containers should be sufficiently stable to resist being overturned by domestic and wild animals. They must also have fly tight covers and be maintained in a clean and odor free condition at all times. The use of 55-gallon drums as refuse containers should be discouraged. Their large size makes them difficult to empty and clean. The absence of lids makes them attractants for flies, wasps, and other insects. Trash and garbage must be removed daily prior to night-fall. More frequent collections may be necessary. Ashes should be removed from barbecues and the grills cleaned frequently with a coarse bristle wire brush.

2-45. Comfort Stations.

Comfort stations providing flush toilets, lavatories, or other facilities for public use

are among the most necessary structures built in the recreation area.

1. In areas where water under pressure is available, modern comfort stations must be located within 300 feet of any campsite and within 500 feet of individual picnic sites. The use of chemical toilets in remote areas may be the only practical solution to sewage disposal, depending on state or local ordinances. Frequent cleaning and maintenance are required to avoid objectionable odors and nuisances in comfort facilities.

2. Permanently constructed comfort stations must be provided with an interior finish of moisture resistant materials which will stand frequent washing and cleaning. The floors, walls, partitions, and interior surfaces must be impervious to water and easily cleanable. Comfort stations must be well lighted, adequately ventilated, and properly protected from the weather. All exterior openings must be covered with 16-inch mesh screen. Doors must open outward and be self closing.

3. When male and female facilities are grouped under one roof, a suitably remote entrance for each section is required. The approaches and entrances must be clearly marked and illuminated. A partition must completely separate the two facilities.

4. Plumbing fixtures must be provided as outlined in figures 2 and 3. Soap (solid, liquid or powder), paper towels or air dryers, and trash containers must be provided. The facilities must be thoroughly cleaned daily or more frequently if required.

Figure 2-2. Comfort Stations for Campgrounds

NUMBER OF SITES	COMMODES MALE	COMMODES FEMALE	LAVATORIES MALE	LAVATORIES FEMALE	URINALS
1 - 20	1	2	1	2	1
21 - 30	2	3	2	2	2

Figure 2-3. Comfort Stations for Picnic Areas

CAR PARKING SPACES	COMMODES MALE	COMMODES FEMALE	LAVATORIES MALE	LAVATORIES FEMALE	URINALS
1 - 40	1	2	1	2	1
41 - 80	2	4	2	2	2

Section VII. GYMNASIUMS

Article
General ---- 2-46
Equipment ---- 2-47
Structural ---- 2-48
Lighting ---- 2-49
Toilet Facilities ---- 2-50
Drinking Fountains ---- 2-51
Recreational Clothing Issue/Rental ---- 2-52

2-46. General.

Gymnasiums and other similar facilities aid in the promotion of physical fitness, good health, and morale. These facilities must be maintained in a safe, sanitary condition. Quarterly inspection of gymnasiums must be

conducted by medical department personnel with preventive medicine responsibilities.

2-47. Equipment.

Sports and physical fitness related equipment must be of an acceptable design and constructed to prevent injury due to structural defects. All equipment must be maintained in safe operating condition.

2-48. Structural.

1. Floors. All playing surfaces, running tracks, passageways, and other floors must be maintained free of spills, debris, uneven surfaces, protrusions and obstacles that may increase the potential of injury.
2. Walls and ceilings must be reasonably smooth, easily cleanable, light colored, and maintained in good repair. Walls in close proximity to basketball and other similar sports must be suitably padded to reduce physical injury.
3. Mats and other cushioning devices must be adequately maintained and cleaned routinely.

2-49. Lighting.

Gymnasiums must be adequately illuminated for spectator or recreational sporting activities. Locker rooms and other areas must also be properly illuminated. All luminaries must be adequately shielded to protect them from damage or breakage from projectiles. Mercury vapor and halide bulbs must be equipped with self-extinguishing mechanisms or be completely enclosed by a shield that absorbs ultraviolet radiation.

2-50. Toilet Facilities.

Separate toilet facilities with water closets, lavatories and urinals as appropriate must be provided for male and female staff and spectators. The facilities must be physically separated from patron shower and locker rooms. Shower/locker rooms must be fitted with adequate lockers, showers, water closets, urinals, and lavatories to accommodate the needs of patrons. The handwashing facilities must be provided with NSF approved cloth towel dispensers or disposable towels and liquid, solid or powdered soap. All toilet and shower facilities must be maintained in a clean sanitary condition free from plumbing defects. Suitable trash containers must be placed in all toilet and locker rooms. Refuse containers must be emptied at sufficient intervals to prevent overflow of refuse.

2-51. Drinking Fountains.

Drinking fountains must be provided to accommodate staff, patrons and spectators. Drinking fountains must be cleaned daily with particular emphasis on the bowl, orifice and orifice guard. Drinking fountains must be the angle jet type.

2-52. Recreational Clothing Rental/ Issue.

Some facilities have the capability of issuing or renting recreational clothing, (shorts, towels, etc.) for use by patrons. The medical department (preventive medicine service) must review and approve the procedures associated with the issue of such items. Laundry facilities within the facility, if adequate and approved, are acceptable.

Section VIII. THEATERS

Article
General ---------- 2-53
Construction Standards ---------- 2-54
Housekeeping Requirements ---------- 2-55
Food Service ---------- 2-56
Safety ---------- 2-57

2-53. General.

The head of Moral Welfare and Recreation is responsible to commanding officers for the operation of theaters at Navy and Marine Corps activities. Included in this responsibility is the elimination of any condition that could adversely affect the health of patrons. Navy and Marine Corps theaters must be inspected periodically by management and medical personnel with preventive medicine responsibilities. These inspections should focus on identifying discrepancies in housekeeping and insect and rodent control.

2-54. Construction Standards.

Minimum construction standards, including ventilation, heating and cooling are included in the Department of Defense Construction Criteria Manual. Adherence to these standards is required in order to protect the health, comfort, and safety of patrons.

2-55. Housekeeping Requirements.

The entire theater, all corridors, aisles, stairways, drinking fountains, and patron seats should be cleaned daily before the building is secured. Waste containers must be emptied as necessary and prior to closing. Food or drink spillage should be cleaned as it occurs or at the next intermission. Unnecessary combustible material is not to be stored in the building or immediate area. Evidence of insects and rodents must be promptly reported by trouble call or work request.

2-56. Food Service.

Snack bars, refreshment stands, vending machines, etc., must be operated in accordance with NAVMED P-5010-1.

2-57. Safety.

Seats must be in good condition with no splinters or protruding nails. Carpets and floors must be periodically checked for worn or frayed edges which could result in tripping. Fire exists must open outward, be equipped with illuminated signs, be properly located, adequate in number, and equipped with panic bars. Fire exists must never be locked with chains or other devices which may hinder safe egress.

Section IX. RIDING STABLES

Article
General ---------- 2-58
Stables and Corrals ---------- 2-59
Water ---------- 2-60
Insect and Rodent Control ---------- 2-61
Waste Disposal ---------- 2-62
Veterinary Service ---------- 2-63

2-58. General.

1. The primary environmental health concern associated with horses is the stabling of these animals and related waste disposal. Accumulation of animal feces provides a breeding place for flies and creates a persistent source of odors. Flies constitute a public health hazard because of their potential for mechanically transmitting disease. Elimination of fly breeding sites is essential to fly control.

2. Riding stables must be inspected at least quarterly by preventive medicine personnel.

2-59. Stables and Corrals.

1. To minimize potential odor and nuisance problems, horses must be stabled in a location removed from, but accessible to, the main recreation center of the activity.

2. Stables must be located on a well drained site. Buildings must be of durable construction to prevent deterioration and/or rodent and insect infestations. Floors in horse stalls must be paved with wooden blocks sealed in asphalt or other impervious material, except concrete. Stall floors must be sloped to facilitate proper drainage. Floors in general storage rooms must be of concrete construction so they can be hosed down and maintained in a clean, odor free condition. A sufficient number of hose bib outlets, equipped with suitable backflow prevention devices must be provided throughout the stable for this purpose.

3. The stable must be provided with an adequate drainage system so that all liquid waste can be satisfactorily drained away from the stable facilities. Corrals and paddock areas should be gently sloped to facilitate natural drainage and minimize standing pools of surface water. A drinking water trough must be provided in the corral for watering animals.

2-60. Water.

Water for employees and patrons must be provided in accordance with the Safe Drinking Water Act. If a well is used as the source of drinking water it must be located at least 100 feet from the stable and paddock sites or the areas where they drain. Untreated well water may be used for watering animals, but such supplies are not acceptable for employees and patrons. To avoid accidental human consumption, non-potable water systems must be plainly labeled, **"WATER UNSAFE FOR DRINKING."** Every effort must be made to ensure that no cross connections exist between potable and non-potable systems.

2-61. Insect and Rodent Control.

The stable must be of rodent proof construction. Openings to the outside must be effectively screened when feasible to prevent the entry of flies and other insects. Feed grains must be stored in rodent proof containers. Feed storage areas must be periodically inspected by medical department representatives for evidence of insect or rodent infestation.

2-62. Waste Disposal.

1. Adequate toilet facilities must be provided for employees and patrons. Separate facilities must be provided for males and females.

2. Manure must be removed and stored or disposed of in accordance with state/local laws and ordinances. Manure must be removed from the stalls and corrals at least once each day, preferably in the early morning.

3. Storage and disposal must be accomplished in a manner that prevents contamination of run-off water.

2-63. Veterinary Service.

The operation of the stable must be under the professional guidance of a veterinarian, either military or contract civilian. If the boarding of privately owned horses is permitted, health certification from a licensed veterinarian, including vaccination records, must be provided before the animal is accepted into the stable.

Section X. SANITATION OF ADMINISTRATIVE SPACES

Article
General ---------- 2-64
Habitability ---------- 2-65
Sanitation/Housekeeping ---------- 2-66

2-64. General.

A significant proportion of military and civilian personnel work in administrative spaces. Clean administrative spaces with adequate lighting, heating, cooling and ventilation enhances morale and promotes productivity. When compared to industrial work spaces, such as shops, engineering spaces, storerooms, and warehouses, there is less chance of occupational injury or disease transmission; nevertheless, injuries do occur and the possibility of disease transmission does exist. Surveys of administrative spaces should be conducted in response to trouble calls or to resolve discrepancies identified during administrative inspections. Evaluations of health concerns in administrative spaces often require a multi-disciplined survey team including environmental health officers, industrial hygienists, etc.

2-65. Habitability.

1. A healthy environment is essential in administrative spaces ashore and afloat to maintain the efficiency of Navy and Marine Corps personnel.

2. The shipboard habitability program, procedures, category standards, requirements, and responsibility are outlined in Naval Sea Systems Command directives and OPNAVINST 9640. 1 series.

a. Ventilation for surface ships requires minimum replenishment with outside air at the rate of 5 cubic feet per minute per occupant. OPNAVINST 5100.19C (Vol 1), concerning heat stress is applicable. Air conditioning of administrative spaces is a design goal which must be considered on an individual basis.

b. Noise standards in administrative spaces are such that direct speech communication must be understood with minimum error and without need for repetition.

c. *General Specifications for Ships of the U.S. Navy* require lighting fixtures to be arranged to provide uniform illumination so that the ratio of maximum foot candles under a lighting fixture to the minimum foot candles between it and the nearest adjacent fixture is not greater than two to one.

3. Requirements for shore facilities are found in the Department of Defense Construction Criteria Manual. The following standards apply to administrative offices and spaces.

a. The net floor area per building occupant must not be less than 115 square feet and not more than 130 square feet.

b. The minimum ratio of plumbing fixtures to the number of persons to be accommodated appears in table 2-3.

c. Air conditioning, evaporative cooling, dehumidification, mechanical ventilation, and type of heating is determined by the climatic zone in which the facility is located. Heating systems must, while operated at rated capacity, maintain an inside temperature of 68 degrees F in administrative spaces.

Table 2-3. Ratio of Plumbing Fixtures to Persons

MALE

OCCUPANTS	WATER CLOSETS	LAVATORIES	URINALS	DRINKING FOUNTAIN
Up to 30	1 / 15	1 / 20	1 / 30	1 / 75
31 to 120	1 / 20	1 / 20	1 / 40	1 / 75

FEMALE

Up to 120	1 / 15	1 / 15	None	1 / 75

d. Lighting Intensities for Administrative Spaces Ashore: Lighting intensities must conform to the guidelines established in the current edition of the Illuminating Engineering Society (IES) Lighting Handbook. The intensity of the general illumination for any area must not exceed 150 foot candles. If a higher intensity is required for a particular task, it must be achieved by supplementing the general illumination with localized (supplementary) lighting. The ratios between general and supplementary illumination must be at least those recommended by IES. Supplementary lighting fixtures must be reviewed and approved by safety personnel prior to installation.

2-66. Sanitation and Housekeeping.

1. Administrative spaces ashore and afloat must be kept clean with no evidence of insects and rodents. Afloat, insect and rodent control is a medical department responsibility. Ashore, the medical department is responsible for inspections and surveys; the public works department is responsible for treatment and control. Administrative personnel must report the presence of insects or rodents to public works by trouble call or work request.

2. Floors should be cleaned daily. The type of floor determines the method of cleaning. Carpets and rugs should be maintained as recommended by the manufacturer. Painted surfaces must be cleaned periodically to prevent accumulation of dirt.

3. Trash receptacles must be emptied daily and cleaned periodically. Disposable liners are recommended.

4. Drinking fountains should be cleaned at least once daily with particular emphasis on the bowl, orifice, and orifice guard. Drinking fountains must be of the angle jet type.

5. Head facilities must be cleaned and resupplied daily.

6. Mops, brooms, brushes, and other cleaning gear must be thoroughly cleaned and properly stored after each use.

7. Cleaning contracts for administrative areas must provide a specified cleaning schedule in the basic contract.

8. Cooking is not permitted in administrative areas; designated lounges can be utilized, if inspected and approved by medical department personnel.

Section XI. SAUNAS AND STEAM ROOMS

Article
General ---------- 2-67
Structure ---------- 2-68
Sanitation ---------- 2-69
Safety ---------- 2-70

2-67. General.

Saunas and steam rooms are used for relaxation or as part of an individual physical fitness program. Saunas operate on the principle of inducing perspiration through high temperature dry heat, whereas steam rooms use moist heat. Saunas and steam rooms must be structurally sound, clean, and free of any potentially dangerous condition.

2-68. Structure.

1. General. Constructive must be no less than industry standards and be approved for installation by the cognizant Engineering Field Division, Naval Facilities Engineering Command. Electrical installation must be in accordance with current Naval Facilities Engineering Command standards. Doors must contain window(s) which allow observation of the entire room. Lighting must be in accordance with current Illumination Engineering Society Standards. Carpet and/other absorbent floor coverings are prohibited.

2. Sauna. Saunas must be constructed of rot resistant woods (e.g., redwood). The floor must be covered with duckboards designed for easy removal and cleaning. Benches must be designed to allow easy cleaning with no hard-to-reach locations. Benches must be maintained in good structural repair. Seating surfaces must be smooth without splintering, protruding nails, or other fasteners that may cause injury.

3. Steam Rooms. Steam rooms must be completely lined with impervious material (e.g., ceramic tile) which will not deteriorate under moist heat conditions. The walls, floors, and ceiling must be maintained in good repair. Benches must be constructed and installed to permit easy cleaning.

2-69. Sanitation.

The interior of saunas, steam rooms, and associated changing areas (see Article 2-50) must be clean and free of debris, foul odors, or other unsanitary conditions. The floor, duckboards, benches, or platforms must be scrubbed daily using a mild detergent followed by an EPA registered disinfectant (e.g., 50 ppm chlorine solution) or commercial cleaner/sanitizer. The consumption of food or drink in saunas or steam rooms is strictly prohibited. The sanitary condition of a sauna or steam room should be determined in conjunction with the inspection of the facility in which it is located.

2-70. Safety.

A thermostatic; control device must be installed which prevents saunas and steam rooms from exceeding 200° F (93° C) and 120°

F (49° C) respectively. Signs must be conspicuously posted listing rules for operation and use. If for any reason a sauna or steam room is equipped with a door lock, the door must be easily opened from inside the room. Steam outlets, piping, and heaters must be shielded to prevent burns. Saunas and steam rooms which are located in remote sites, away from pedestrian traffic, should be equipped with an alarm or equivalent system which can be activated by the patron in an emergency.

SECTION XII. REFERENCES

2-71. References.

The following is a list of publications used in the preparation of this chapter. Copies should be on hand or available to medical department personnel for reference and guidance. State and local guidance should also be consulted, and procured as necessary. Revisions and supplements are published as necessary and personnel must ensure that they are on the distribution list to receive current editions.

1. DoD Instructions

DoD 4270.1-M, Department of Defense Construction Criteria Manual

2. Navy Instructions

a. SECNAVINST 1640.9 series, Department of the Navy Corrections Manual

b. OPNAVINST 1700.9 series, Child Development Programs

c. OPNAVINST 1640.7 series, Manual for the Operation of a Waterfront Brig/Correctional Custody Unit.

d. OPNAVINST 1640.8 series, Manual for the Administration of Afloat Brigs.

e. OPNAVINST 5090.1 series, Environmental and Natural Resources Protection Manual.

f. OPNAVINST 5100.19 series (Vol 1), Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat

g. OPNAVINST 5100.23 series, Navy Occupational Safety and Health Program Manual

h. OPNAVINST 9640.1 series, Shipboard Habitability Program.

i. OPNAVINST 11103.1 series, Adequacy, Assignment, and Utilization of Bachelor Quarters (BQ)

j. BUPERSINST 1710.11 series, Navy Recreation Operational Policies

k. NAVMEDCOMINST 6260.5 series, Occupational Noise Control and Hearing Conservation.

l. NAVMEDCOMINST 6770.1 series, Linen Management

3. Navy Publications

a. General Specifications for Ships of the United Stats Navy, NAVSEA S9AAO-AA-SPN-010/GEN-SPEC.

b. Navy Bachelor Quarters Manual, NAVPERS 15606

c. Naval Ships' Technical Manual, Chapter 655, Laundry

d. Naval Ships' Technical Manual, Chapter 670, Stowage Handling, and Disposal of hazardous General Use Consumables

e. NAVFAC DM-4, Electrical Engineering

f. NAVFAC DM-37.4, Brigs, Detention Facilities

g. NAVMED P-117, Manual of the Medical Department

h. NAVMED P-5010-3, Ventilation and Thermal Stress Ashore and Afloat

4. Non-DoD Publications

a. *"Environmental Health Guide for Mobile Home Communities,"* U.S. Department of Health Education, and Welfare, Public Health Service, Revised 1975. Available from: Mobile Home Manufacturers Association, 14650 Lee Road, Chantilly, VA 22021

b. Title 29, Code of Federal Regulations, Part 1910.37 (29 CFR 1910.37) *"General Industry,"* OSHA Safety and Health Standards

c. Title 29, Code of Federal Regulations, Part 1910.1030 (29 CFR 1910.1030), *Control of Occupational Exposure to Bloodborne Pathogens*

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