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NAVFAC PTS-E10 (September 2022)  
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Preparing Activity: NAVFAC SUPERSEDING PTS-E10 (December 2018)  
  
PERFORMANCE TECHNICAL SPECIFICATION  
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SECTION E10  
  
EQUIPMENT

09/22

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NOTE: This section is intended to be used as a guide and contains requirements that are common to fitness centers; however, not all requirements and equipment items will be applicable to all projects. In addition, there may be special requirements for a particular project that are not addressed at all. The RFP preparer may have to incorporate additional information to address these special requirements in this PTS and corresponding Part 3 ESR. If the RFP preparer chooses to delete building elements that are not required for the project, do not change the remaining Uniformat paragraph designations (example - A102001). Uniformat designations are unique to the products they are assigned to. However, the subparagraph numerical extensions (example – 1.2 or a,b,c) of the Uniformat designations may change if subparagraphs are deleted.  
  
This guide specification is formatted utilizing Uniformat II, an industry recognized standard, ASTM E 1557. When the RFP preparer chooses to add a paragraph that does not apply to an existing building element already included in the specification, refer to the Uniformat/WBS located on the NAVFAC Design-Build Website for a listing of Uniformat II designations and definitions.  
  
NOTE: The RFP preparer may view or hide the criteria notes in this PTS section by modifying the WORD preferences for "Hidden text". To view the criteria notes, choose "File" then "Option". Click "Display" then check the "Hidden text" box under "Always show these formatting marks on the screen". In the same section, check the box for "Print hidden text" under "Printing options" to print the criteria notes.  
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NOTE: The following Table of Contents is for navigation purposes within the document and is not intended to be part of the final edited documents.  
  
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**E10 GENERAL**

RFP Part 3 including the Engineering System Requirements (ESR) provide project specific requirements. The RFP Part 4, Performance Technical Sections (PTS) provide generalized technical requirements that apply to multiple facility types and include more requirements than are applicable to any one project. Therefore, only the RFP Part 4 requirements that apply to the project and further define the RFP Part 3 project specific requirements are required.

**E10 1.1 GENERAL REQUIREMENTS**

Where required by the project program, obtain the services of equipment specialists to specify any audiovisual, shop, fitness equipment, or other specialty equipment. Equipment specialists must not have any affiliation with the product specified. All specialty equipment must be installed by qualified installers regularly engaged in installing the specialty equipment. Systems furnishings installers must be the systems furniture manufacturer's dealer of record.

**E10 1.2 DESIGN GUIDANCE**

Provide the design and installation in accordance with the following references. This Performance Technical Specification (PTS) adds clarification to the fundamental requirements contained in the following Government Standards. The general requirements of this PTS section are located in PTS Section Z10, *General Performance Technical Specification*.

Industry standards, codes, and Government standards that are referenced in the section text that are not found in the [Unified Master Reference List (UMRL)](https://www.wbdg.org/ffc/dod/unified-master-reference) in the [Federal Facility Criteria (FFC)](https://www.wbdg.org/ffc/federal-facility-criteria) at the [Whole Building Design Guide (WBDG)](https://www.wbdg.org/) website, are listed below for basic designation identification. Comply with the required and advisory portions of the current edition of the standard at the time of contract award.

**E10 1.2.1 Industry Standards and Codes**

Loading Dock Equipment Manufacturers' Association (LODEM)

**E10 1.2.2 Government Standards**

UNIFIED FACILITIES CRITERIA (UFC)

|  |  |
| --- | --- |
| UFC 1-200-01 | DoD Building Code (General Building Requirements)(A reference in this PTS section to UFC 1-200-01 requires compliance with the Tri-Service Core UFCs that are listed therein, which includes the following significant UFC(s):UFC 3-101-01, ArchitectureUFC 3-120-10, Interior Design) |
| UFC 1-200-02 | High Performance and Sustainable Building Requirements |

**E10 1.3 PERFORMANCE VERIFICATION AND COMPLIANCE TESTING**

Provide verification of satisfactory special equipment and furnishing systems performance via Performance Verification Testing, as detailed in this section of the RFP.

**E10 1.3.1 Field Tests for Dock Leveling Equipment**

a. Roll-over Tests - Move roll-over load of 20,000 pounds (9,072 kg) over the dock leveler between the bed of a freight carrier and the building loading dock surface for ten cycles. With the ramp extension retracted and the ramp platform leveled with the building loading dock surface, run a 20,000 pound (9,072 kg) roll-over load over the ramp in various directions for 20 cycles. No permanent deformation or hydraulic fluid leakage must occur subsequent to examination after these tests.

b. Drop Tests - Twice, drop test the dock leveler at the indicated rated capacity as follows: With the load on the platform and the load resting on a vehicle carrier bed not less than 10 inches (254 mm) above loading dock surface, pull the carrier or pull away from the lip, leaving the loading ramp unsupported. The measured vertical drop of the dock leveler taken at the point where the lip rests on the vehicle carrier must not exceed 4 inches (102 mm) during each of the drop tests. Inspect the loading ramp after each drop and ensure no damage or distortion to the mechanical, electrical, or structural components. There must be no leakage from the hydraulic system.

c. Acceptance Tests - Perform an acceptance test in the presence of the dock leveler manufacturer and the Contracting Officer subsequent to the roll-over load and drop tests. Conduct operation of the equipment through all of its motions and specified checks as follows: (a) extend lip to rest on a variety of freight carriers with beds up to 12 inches (305 mm) above and below deck level; (b) test 102 mm (4 inches) drop limitation with 7,000 pound (3,175 kg) load on ramp, evenly distributed; (c)test level compensation with the ramp, loaded with a minimum of 7,000 pounds (3,175 kg); and (d) test proper compensation (float) for various compression of counter-springs, with ramp loaded and unloaded.

**E10 1.4 DESIGN SUBMITTALS**

Provide design submittals in accordance with Part 2 Section 01 33 10.05 20, *Design Submittal Procedures*, Facilities Criteria (FC) 1-300-09N, *Navy and Marine Corps Design Procedures*, UFC 3-101-01, *Architecture*, and UFC 3-120-10, *Interior Design*.

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NOTE: NAVFAC has made every effort to use commercial standards in the PTS sections. This PTS section is designed to only use commercial standards. If project requirements dictate the use of a UFGS sections as a standard, add a paragraph here listing the required UFGS section. State in the paragraph that the DOR must edit this UFGS section in accordance with PTS Z10 and submit it as a part of the design submittal.  
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**E10 1.5 CONSTRUCTION SUBMITTALS**

Submit construction submittals in accordance with PTS Section Z10, *General Performance Technical Specifications*. In addition to the Z10 requirements, the Designer of Record (DOR) must approve the following construction submittals as a minimum:

Field tests of equipment, vault door, loading dock equipment, kitchen equipment and unit kitchens.

Energy efficiency ratings for food service equipment, as applicable.

**E1010 COMMERCIAL EQUIPMENT**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*   
NOTE: In the following sub-paragraphs (within E101004) provide performance criteria for the laundry equipment as identified by meeting with the Activity user and discussion with CNIC and coordination with the "Room Requirements" in Part 3, Chapter 5.  
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**E101004 LAUNDRY EQUIPMENT**

**E101004 1.1 EXTRACTORS**

**E101004 1.2 DRYERS**

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NOTE: If Teller and Service Equipment is required as included in Part 3, provide performance specification or model type information below.  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**E101005 TELLER AND SERVICE EQUIPMENT**

**E1020 INSTITUTIONAL EQUIPMENT**

Institutional equipment includes items that are normally found in hospitals, laboratories, auditoriums, and libraries.

**E102001 MISCELLANEOUS COMMON FIXED & MOVABLE EQUIPMENT**

This section must include fixed workbenches, hazardous and non-hazardous shop materials cabinetry, shop tools, and other fixed and movable equipment.

**E102001 1.1 CEILING FANS**

Ceiling Fans shall be commercial/industrial quality and shall be sized for the area and ceiling height of the space to be cooled. Provide secondary support cable for each unit and downrods where applicable. Provide steel safety cage for each unit and adjustable speed controls. Equipment shall be Underwriters' Laboratories, Inc. listed.

**E102009 AUDIO-VISUAL EQUIPMENT**

**E1030 VEHICULAR EQUIPMENT**

**E103002 LOADING DOCK EQUIPMENT**

This paragraph covers the requirements for dock bumpers, truck-trailer restraining devices, and industrial, mechanical and electro-hydraulic dock levelers of a fixed hinged type. All loading dock equipment must be Navy certified.

Provide a Loading Dock Equipment System for the protection of service docks and for the loading and unloading of service vehicles.

**E103002 1.1 DOCK LEVELERS**

Based on the performance requirements of the project program, provide American National Standards Institute (ANSI) MH30.2 (see LOEDM) steel tread plate lip and platform, hinged and supported from beneath by steel framework that contains lifting, positioning, and lowering assembly. The design must permit washing with water and detergents, and operation in an ambient temperature from 0 degrees F to plus 110 degrees F (–18 degrees C to plus 43 degrees C). Minimum roll over capacity must not be less than 20,000 pounds (9,072 kg).

**E103002 1.1.1 Height Adjustment**

Provide a ramp with a minimum incline adjustment of 24 inches (600 mm). Divide 12 inches (300 mm) above and 12 inches (300 mm) below the platform height.

**E103002 1.1.2 Loading Ramp Compensation**

a. Freight Carrier Out of Level - Allow a minimum correction of one inch for each 18 inches (450 mm) and maximum of 4-inch (100 mm) correction of ramp width over the width of the ramp.

b. Loading and Unloading of the Freight Carrier - When the lip is extended, provide a 4-inch (100 mm) compensation for carrier spring deflection to allow full contact between the lip and the carrier bed.

**E103002 1.1.3 Safety Devices**

a. Electro-hydraulic System - Provide a device to automatically prevent a drop of more than 4 inches (100 mm) of the lip should the freight carrier move away from the dock leaving the lip unsupported.

b. Mechanical System - Provide a three-position safety system to limit platform fall to dock level and 4 and 8 inches (100 and 200 mm) below dock level.

c. Dock Bumpers - Provide laminated rubber, tire fabric or equivalent dock bumpers along the length of the loading dock.

**E103002 1.1.4 Operation**

a. Mechanical Control - Mechanical chain activated, with extension-spring operation and counter-balance non-manual, raising and lowering system.

b. Electro-Hydraulic Control - Provide dock leveler with pushbutton control, heavy-duty dust tight and oil tight rated in accordance with National Electrical Manufacturers Association (NEMA) ICS 2, Part ICS2-216 for alternating current.

c. Construction and Materials - The entire live load carrying surface of the ramp and rear attachment must not be less than 1/4-inch(6 mm) thick, 55,000 PSI (379,200 kPa) minimum yield strength, low alloy, non-skid steel tread plate.

d. Toe Guards - Provide sides or edges of the ramps which rise above the surrounding loading dock with sheet carbon steel skirts or toe guards of minimum 14 gage nominal thickness.

**E103002 1.1.5 Electro-Hydraulic Lift System**

Provide a complete and separate system for each dock leveler. Design system to withstand not less than 150 percent of the design operating pressure. Provide hose, fittings, pipe and tubing with working pressures based upon a minimum 4 to 1 safety factor of bursting pressure.

**E103002 1.1.6 Electrical Requirements**

National Fire Protection Association (NFPA) 70, NEMA ICS 2, NEMA ICS 6 and NEMA MG 1

a. Motor - Conform to NEMA MG 1 and continuous duty or 60-minute time rated, industrial type, single speed rated for operating conditions.

b. Control - NEMA ICS 2, size 0 controller for heavy industrial service.

c. Transformer - Totally enclosed, self-cooled, dry type transformer. Incorporate circuit breakers with ground fault interrupting protection conforming to Underwriters Laboratories (UL) 943.

**E103002 1.1.7 Structural Warranty**

Present a manufacturer's warranty certifying the leveler against operational malfunction or structural failure, or both, for a period of 10 years from the date of acceptance by the Government. Warranty may exclude failure through overloading evidenced by member breakage or residual deformation; but it must not exclude breakage of welds or fastenings, fatigue breakage of components, or wear of moving parts. Provide warranty to cover the full costs of repairs, or replacements in case of a nonrepairable failure.

**E103002 1.1.8 Accessories**

a. Dock Truck or Trailer Restraining Device - Provide self-aligning device, with a positive restraining force of not less than 18,000 pounds (8,165 kilograms). Device must service all truck or trailers with Interstate Commerce Commission (ICC) bars located between 12 and 30 inches (300 and 750 mm) above ground level.

**E1040 GOVERNMENT FURNISHED EQUIPMENT**

Refer to the project program.

**E1090 OTHER EQUIPMENT**

**E109002 FOOD SERVICE EQUIPMENT**

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NOTE: The following equipment is a list of the most often used kitchen equipment and the applicable commercial standard for that equipment. The kitchen design requirements should be identified in the RFP Part Three, Project Program.  
  
Do not utilize items from the following equipment list if the items are furnished as Government Furnished Equipment (GFE). List all GFE in the RFP Part Three, Project Program.  
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Provide Food Service Equipment and the kitchen design in accordance with FC 4-722-01N, *Navy and Marine CorpsDining Facilities*. This paragraph covers the items of commercial food service equipment. Included are items used for liquid and solid food storage, food preparation, cooking, display, serving, and clean up equipment. Provide 180 degree F (82 degree C) hot water or chemical treatment for sinks, dishwashers, pot washers, and exhaust ventilator wash down systems.

Provide products that meet or exceed the specified energy efficiency requirements of FEMP designated or Energy Star qualified products. Submit documentation certifying that products conform to Public Law 109-58 by meeting or exceeding Energy Star or FEMP efficiency requirements as defined at "Energy-Efficient Products" at <http://femp.energy.gov/procurement> . Indicate the Energy Efficiency Rating.

**E109002 1.1 LIGHT COMMERCIAL ELECTRIC KITCHEN EQUIPMENT**

**E109002 1.1.1 Freezer**

UL 250, minimum 14 cubic feet (0.39 cubic meters), frost-free.

**E109002 1.1.2 Refrigerator**

UL 250, refrigerator with frost-proof freezer, minimum 14.6 cubic feet (0.41 cubic meters).

**E109002 1.1.3 Freestanding Ice Maker**

UL listed and NSF approved; self-contained, air-cooled model, minimum ice production of 355 pounds (161 kg) per 24 hours, and a minimum bin storage capacity of 180 pounds (82 kg) of ice cubes.

**E109002 1.1.4 Microwave Oven**

UL 923, minimum 1 cubic foot (0.03 cubic meter) capacity.

**E109002 1.1.5 Oven**

UL 858, self-cleaning and built-in.

**E109002 1.1.6 Range Hood**

UL 858, vented or non-vented with two-speed fan.

**E109002 1.1.7 Dishwasher**

UL 921 or UL 749 with detergent dispenser. For heavy-duty dishwasher, provide stainless steel commercial grade with approximately 300-dish per hour and 540 glasses per hour ratings.

**E109002 1.1.8 Residential Garbage Disposal**

UL 430, stainless steel, continuous feed with minimum 1/2 or 3/4 hp motor. Optional 1 hp motor for heavy usage.

**E109007 ATHLETIC, RECREATIONAL & THERAPEUTIC EQUIPMENT**

**E109007 1.1 BASKETBALL BACKBOARDS**

Retractable, powered or manual as noted in Part 3, Chapter 6. Backboards shall include nets and breakaway rims.

**E109007 1.2 VOLLEYBALL EQUIPMENT**

Stanchions, stanchion protective pads, flush flooring inserts with accessory supports, nets, and net antennas.

**E109007 1.3 ELECTRONIC SCOREBOARDS**

**E109007 1.4 30-SECOND TIMING CLOCKS**

**E109007 1.5 DIGITAL WALL CLOCK**

Provide hardwired electric digital wall clock. Clock to include hours, minutes and second. Numeral height must be of size to be easily viewed by runners utilizing the indoor running track.

**E109007 1.6 WALL SAFETY PADDING**

Provide wall padding shall to provide "medium to heavy duty" protection. A flexible PVC or vinyl reinforced fabric shall fully wrap each unit. Pads shall be 6 ft. high from top of wall base. Padding shall be coordinated w/ wall devices. Padding to provide protection to provide bacteria, mold and mildew resistance. Wall padding shall have a "Class A" rating in accordance with ASTM-E84 and NFPA 255. Padding shall be removable by concealed mounting.

**E109007 1.7 VOLLEYBALL ELEVATED JUDGES STANDS**

**E109007 1.8 WALLEY-BALL NET MOUNTING SOCKETS**

Provide recessed walley-ball net mounting sockets within racquetball court walls. Socket to be concealed by concealed hinge flush cover.

**E109007 1.9 FITNESS EQUIPMENT**

**E109007 1.10 GYMNASTIC EQUIPMENT**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*   
NOTE: Provide the following equipment only if a boxing program is determined a component of this project through meeting with the Activity user and CNIC program manager.  
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**[E109007 1.11 PUNCHING BAGS & SPEED BAGS]**

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NOTE: Provide the following equipment only if a Multipurpose Field is a component of this project.  
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**[E109007 1.12 SOCCER GOALS AND CONES**

**E109007 1.13 EXTERIOR ELECTRONIC SCOREBOARD**

**E109007 1.14 FOOTBALL FIELD REMOVABLE GOAL POSTS]**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*   
NOTE: Provide the following only if a Rock Climbing Wall is a component of this project.  
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**[E109007 1.15 ROCK CLIMBING WALL**

**E109007 1.15.1**

General – Climbing walls shall be designed and constructed to meet or exceed all applicable local, state, and federal building codes and standards. Rock climbing wall design, engineering and construction shall comply with applicable current Climbing Wall Industry Group(CWIG) and Climbing Wall Association (CWA) Standards. The design shall be performed by a design/manufacturer with 5-years experience of rock climbing walls and who are familiar with climbing wall industry standards. The design shall incorporate the panel design, panel support framing and connection design to the base building elements, and coordination of flooring system/landing surfaces with climbing wall.

The climbing wall shall be designed to provide indoor climbing opportunities that parallel the look, feel and spirit of an outdoor rock climbing experience, providing flat features, simple curves, complex curves and crevasses.

**E109007 1.15.2**

Anchors – Anchors shall be provided and withstand loads capable of withstanding forces in multiple directions according to current CWIG Standards. Anchor types to be considered in the design are – top-rope upper belay running anchors, lead-climbing protection anchors and belay floor anchors.

**E109007 1.15.3**

Panel Support Framing – Support framing shall be compatible with the panels and associated attachment to both panels and base building supporting elements. Support framing shall be engineered according to applicable codes and standards and accommodate any seismic considerations. Support framing shall not be of wood members.

**E109007 1.15.4**

Panels – Panels may be constructed of polyurethane elastomer (90A Hardness), plywood with cementitious (polymer-modified) coating. Panels (layout and design)shall provide a variety of relief and contours including but not limited to – vertical climbs, chimneys, negative pitches, overhangs, bumps, positive pitches, arÃªtes, dihedrals, flakes, chimneys and butresses.

**E109007 1.15.5**

Accessories – Provide associated accessories: holds, top anchors, lead anchors, landing mats meeting or exceeding ASTM 1292-04 Standards from an 11 ft. (3.35M). Landing pads shall have a locking strap storage/attachment system to prevent unwanted use of the wall.]

**E109090 OTHER SPECIALIZED FIXED AND MOVABLE EQUIPMENT**

Specialized fixed and moveable equipment not described by the other assembly categories.

**E109090 1.1 AUTOMATIC EXTERNAL DEFIBRILLATORS (AED)**

--End of Section--