



# VEHICLE INSTRUMENTATION DOCK



## Purpose

The Vehicle Instrumentation Dock provides a covered area for Range personnel to store, install, and test vehicle player units.

## Design Requirements

See the standard drawing for additional details and notes.

### General

The standard design must be site adapted to local conditions such as climate, typical construction materials and methods, and the installation design guide. Design the facility in accordance with the design codes and criteria of the specific location, geotechnical information, structural loads, mechanical design criteria, etc.

The facility typically requires access by able-bodied personnel only and does not require ADA compliance.

### Mechanical

Provide louvered door with dust filter and exhaust fan for enclosure.

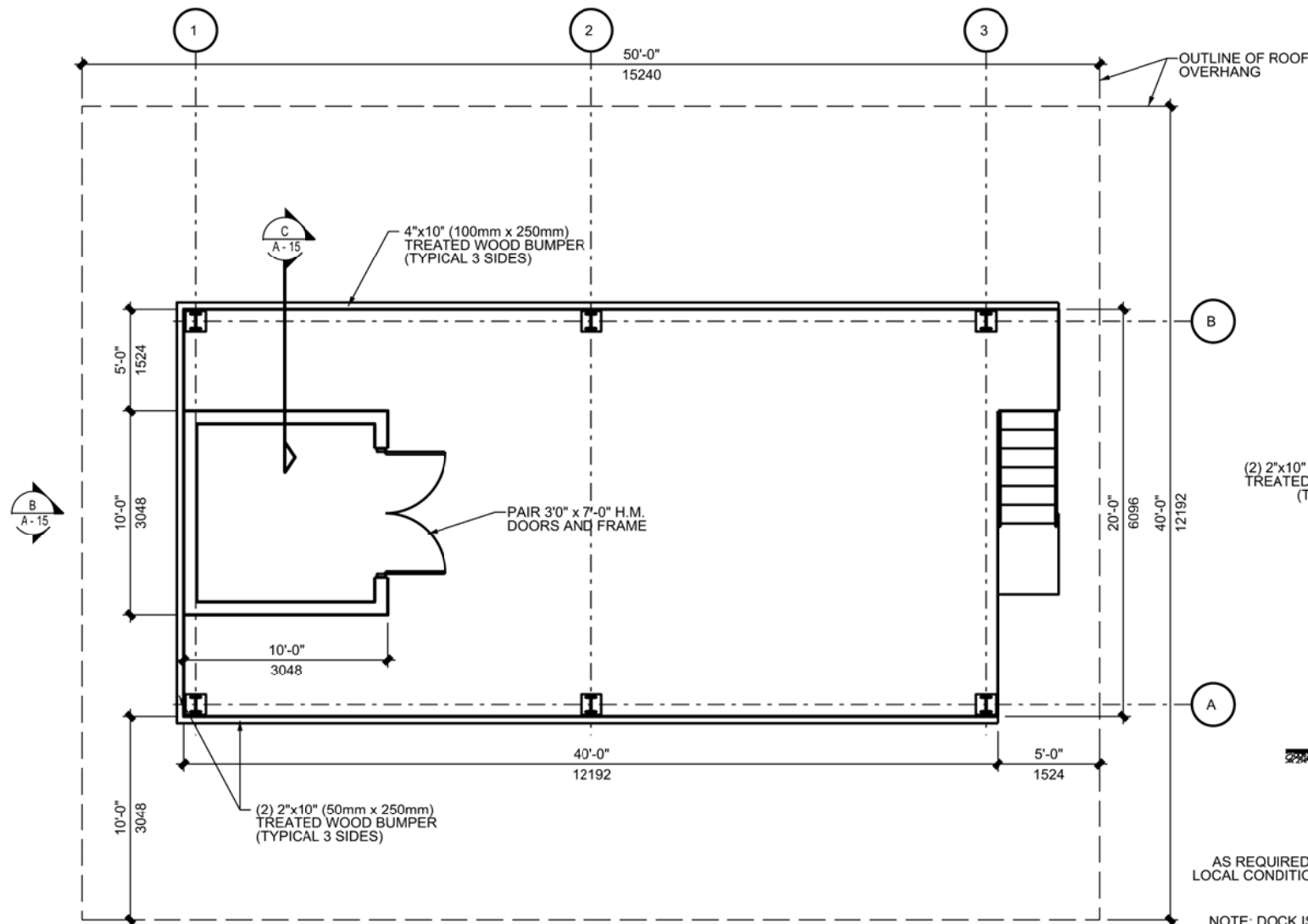
### Electrical

#### Power

Provide 120/240V, 1 phase, 3-wire secondary power to the Vehicle Instrumentation Dock. Extend Rigid Steel conduit a minimum of 5' (1524mm) outside the building for power and communication circuits entering and leaving the building. Ensure voltage drop complies with NEC standards and Army technical manuals. Install grounding in accordance with NFPA 70, the NEC, and other applicable standards. Receptacles are general purpose; GFCI weatherproof, 120V, 20A duplex mounted a minimum of 24" (450 mm) above the finished floor on each column and one inside the storage room. Design illumination levels in accordance with IES. Include both white and red lighting for lower level night light if required. Provide separate switching for white lamps and red lamps. Ensure that the emergency electrical system complies with NFPA 70 and NFPA 101. Provide lightning protection in accordance with NFPA 780. Include two, single pole, 20amp circuits each with a single quad outlet inside enclosure for player unit batteries.

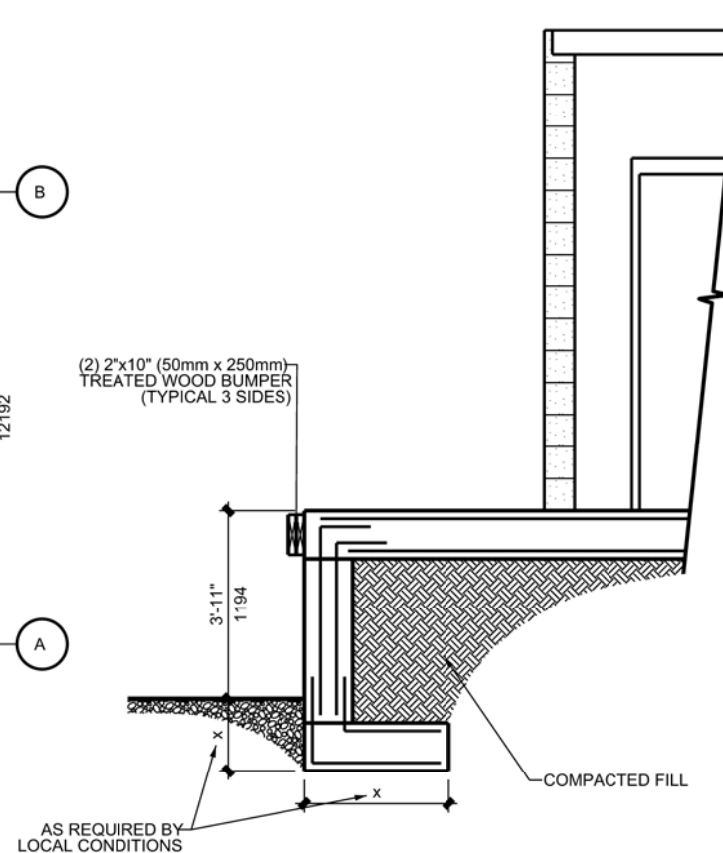
#### Data

Provide Data connection to the Vehicle Instrumentation Loading Dock via a 6-strand, single mode, fiber optic cable from the AAR Communications Room. Terminate the fiber optic cable on a 6-port, "SC" type connector patch panel installed inside a 24"x 12"NEMA 4 enclosure. Ensure the enclosure contains a metallic back plate, the fiber optic patch panel, and a duplex receptacle (not GFI). Ground the enclosure via a minimum #6 AWG ground conductor back to power grounding electrode. Install the enclosure inside the storage room. The enclosure should be of the same type as a Master Target Data Panel (MTDP).



**FLOOR PLAN**

SCALE: 1/4" = 1'-0"



**SECTION**

SCALE: 1/2" = 1'-0"

**General**

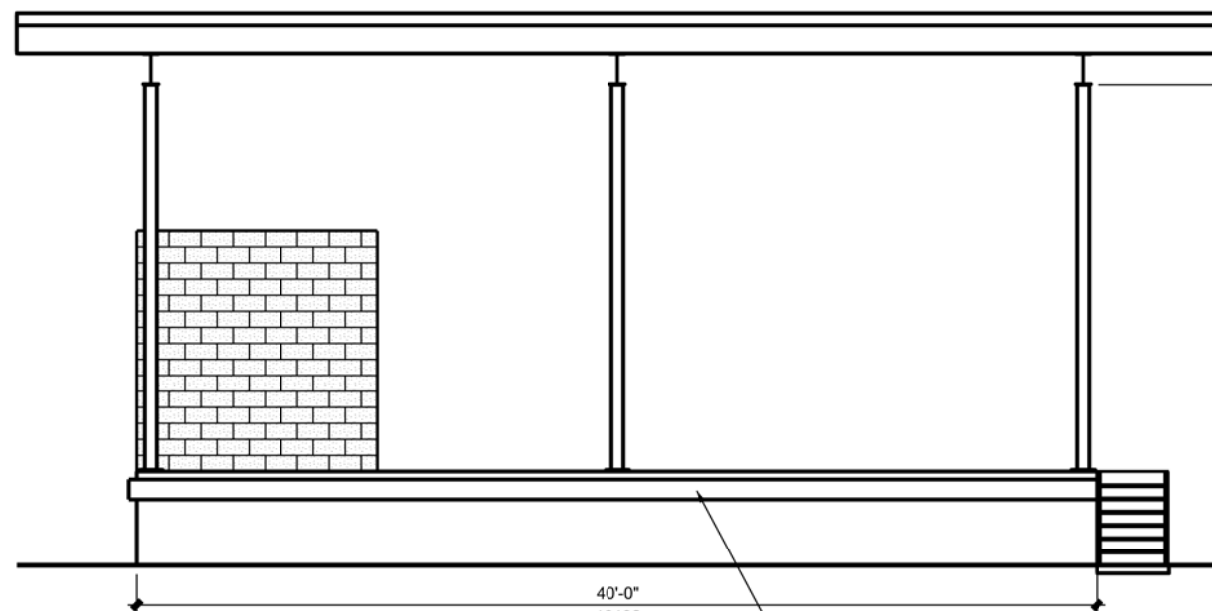
The Vehicle Instrumentation Dock provides an area where player units are installed on the vehicles. The facility is normally programmed with the unit of measure of each (EA), however, the size should not exceed what is shown on this drawing. Size Calculation; 50' x 40' x 1/2 plus 10' x 10' x 1/2 equals 1050 sf (97.5sm).

**Site Adaptation**

This standard definitive design should be adapted to local conditions such as climate, topography, seismic zone, available construction materials and techniques and the existing character of surroundings building. These factors may affect plans, elevations and building systems. The building foundation must be designed based on the results of a geotechnical investigation. The design and construction must comply with applicable codes and standards including: technical instruction TI 800-01, "Design Criteria"; Department of the Army regulations, technical manuals, handbooks, standards, and specifications.

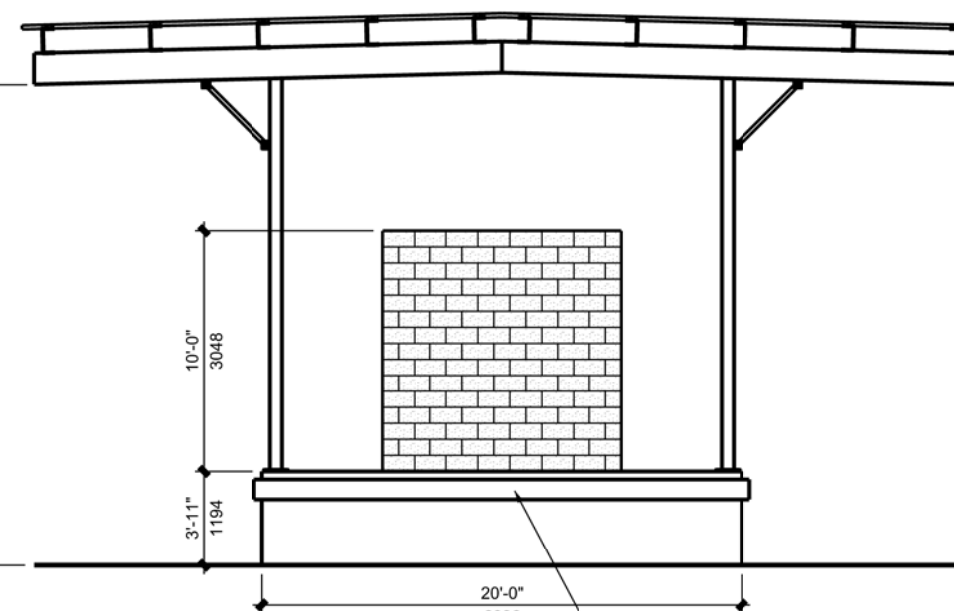
**ADDITIONAL CRITERIA**

Refer to the Range Design Guide for additional information and requirements.



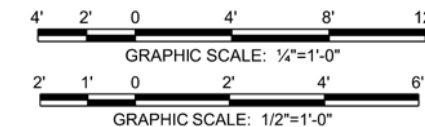
**ELEVATION**

SCALE: 1/4" = 1'-0"



**ELEVATION**

SCALE: 1/4" = 1'-0"



Rev.	Date	Description

Designed by:	Date:	Rev.
Drawn by:	Design file no.:	
Reviewed by:	Drawing code:	
Submitted by:	File name:	

U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE HUNTSVILLE, ALABAMA  
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RANGE AND TRAINING LAND PROGRAM STANDARD DESIGN MANUAL  
VEHICLE INSTRUMENTATION DOCK

Sheet reference number: