



# COVERED MESS



RANGE AND TRAINING LAND PROGRAM – MANDATORY CENTER OF EXPERTISE

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

HUNTSVILLE, ALABAMA

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## Purpose

The Covered Mess provides an area with protection from the weather for troop messing at the range site. It also provides an assembly area for personnel during lightning events. The standard sized facility is included in the standard set of buildings for most ranges, see matrix for specifics.

## Design Requirements

See the standard drawings in the RDG for details of construction not included in this document.

### 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.

Unless specifically requested by the installation, the facility requires access by able-bodied personnel only and does not require ADA compliance.

### Siting

Site the facility away from the firing line and range maintenance areas. Ensure access is available for delivery vehicles as necessary. Consider access and circulation between other ROCA facilities keeping separation between trainees and the areas used by maintenance personnel.

### Architectural

The size of the standard facility is 800 square feet (74.3 square meters). The building is typically 20 feet wide and 40 feet long. The facility includes three rows of stand-up eating tables, typically stainless steel. Depending on the type of mess service at the installation, include a lower service table. For Service Schools that train larger sized companies, the standard increases to 1413 square feet (131.27 square meters), 26 feet 8 inches wide by 53 feet long, with four rows of eating tables.

Provide a finished ceiling with all flashing required to enclose structure in order to keep birds and other pests from nesting.

Coordinate building style and material choices with the user and the installation design guide. The standard design depicts a pre-engineered metal building version. Floors are typically concrete and sloped to drain.

### Mechanical

There are no range specific mechanical requirements for this building.

### Electrical

#### Power Distribution

Primary distribution service may be overhead or underground. Consider the type of tactical vehicles used in the Range Operations and Control Area, proximity of building to Ammunition Supply/Breakdown/Distribution points, and local utility requirements for determining the routing

of primary power to the facility. Provide 120/240V, single-phase, 3-wire secondary power to the facility. Provide this facility with a panelboard supplied with main circuit breaker that serves separate circuits for the lighting and convenience outlets.

### **General Power Requirements**

Provide two GFCI, general-purpose 120V duplex receptacles, on separate 20A circuits; mounted 24 inches (600mm) above the finished floor at the end of the serving table.

### **Lightning Protection and Grounding**

Grounding and lightning protection systems are required for safety. Building electrical system grounding will consist of one or more ground rods connected to the service panel in accordance with NFPA 70.

RTLTP standards require lightning protection for the Covered Mess regardless of NFPA 780 Risk Assessment. The lightning protection system may be provided as a mast-style system or air terminals located on the building structure. Use exothermic welds for cable connections and connections to the ground rods and structural steel. Follow local installation requirements for lightning protection systems where they are more stringent than the requirements defined in the Range Design Guide.

Use NFPA 70 to determine bonding requirements of metal eating tables to the lightning protection system. Evaluate actual method of table construction to ensure bonding of all metal parts as required. Special detailing may be required for tabletops constructed of wood wrapped in light gauge stainless steel.

### **Lighting**

Design illumination levels in accordance with the IES. Provide red lenses or red lamps in addition to standard lighting on ranges where training will occur at night. See Night Operations Lighting paragraph for more information.

### **Night Operations Lighting**

To prevent interference with specialized equipment used during night operations, provide separate fixtures with red lenses or red lamps in addition to standard lighting on ranges used for night training where the lights will be visible from training and/or staging areas. Include the following areas as a minimum

- exterior lighting visible from the training area
- rooms where ROCA building has windows that are facing the training area and cannot be covered
- rooms where the building has a doors that opens to the training area

Provide separate switching for the standard and red lighting. Clearly label switches and provide covers over white lights, or similar protective measures, to deter turning on white lights while

red lights are in use. Locate switches near points of egress. Provide a means to turn off all exterior white lights including an over-ride for lights controlled by a photocell.



### **Common User Cable Systems**

The Covered Mess does not require telephone connection.

### **Special Considerations**

Fire protection is not normally required for this facility, though installation requirements may control. Consult the installation Fire Marshal for local requirements. Provide fire extinguishers and brackets per NFPA and UFC 3-600-01.

GENERAL

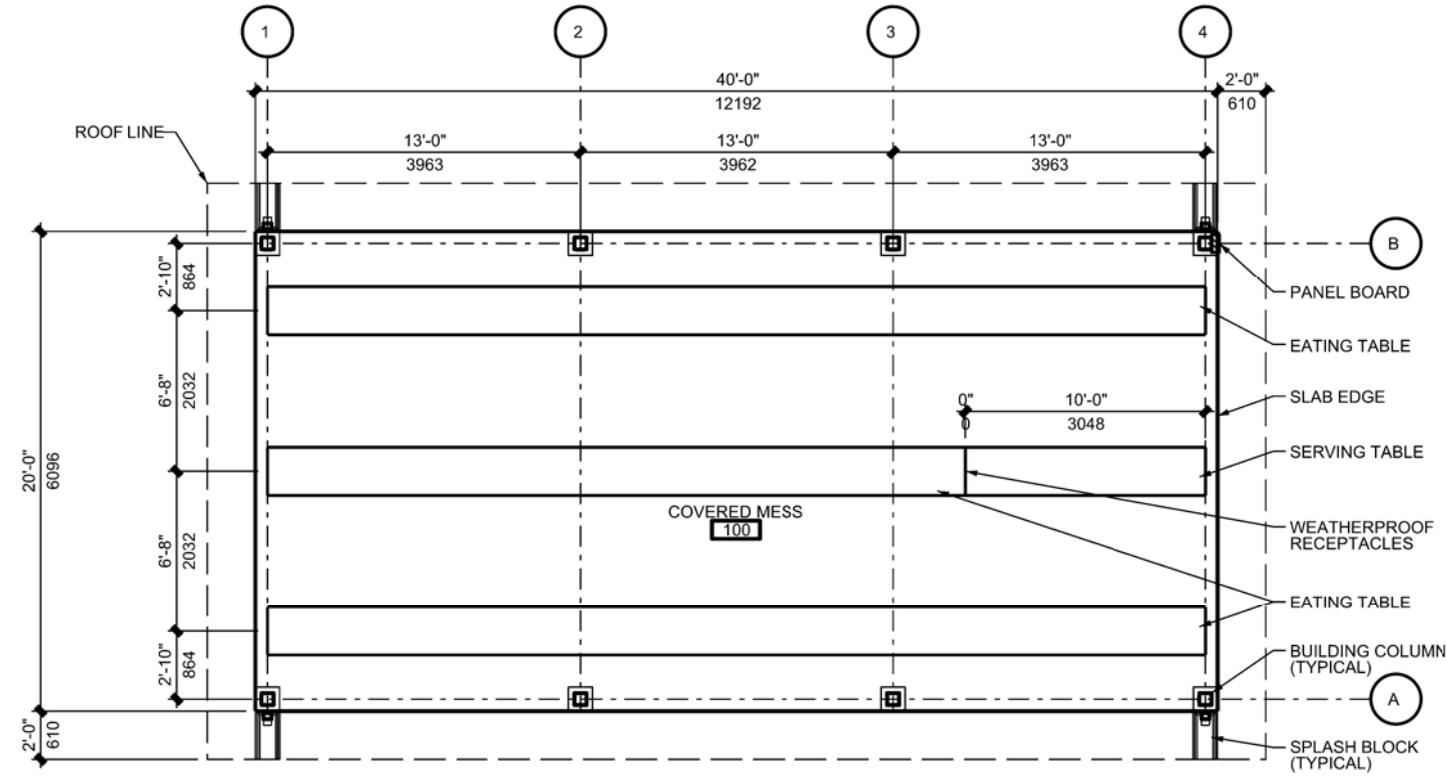
The primary purpose of the Covered Mess is to provide an area with some protection from the weather for troop messing at the range site. It also provides an assembly area for personnel during lightning events. The size of the standard facility is 800 square feet (74.3 square meters). The building is typically 20 feet wide and 40 feet long. The facility includes three rows of stand-up eating tables, typically stainless steel. For Service Schools that train larger sized companies, the standard increases to 1413 square feet (131.27 square meters), 26 feet 8 inches wide by 53 feet long, with four rows of eating tables.

SITE ADAPTATION

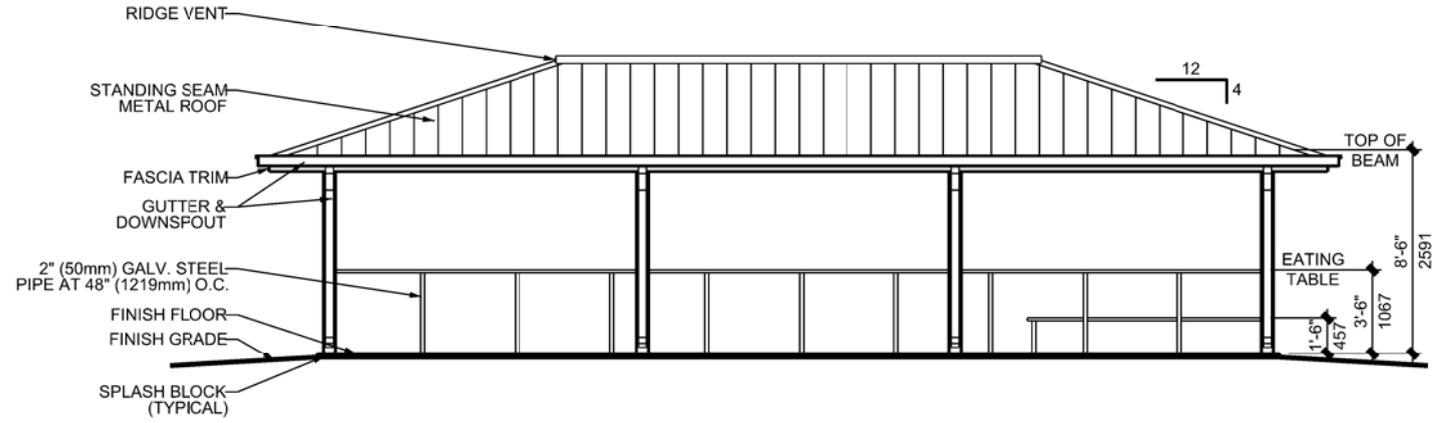
The standard design must be site adapted to local conditions such as climate, typical construction materials and methods, and the installation design guide. Design the facility in accordance with the design codes and criteria of the specific location, geotechnical information, structural loads, mechanical design criteria, etc. The design and construction must comply with applicable codes and standards including UFC 1-200-01 "DoD Building Code", Department of the Army regulations, technical manuals, handbooks, standards and specifications, and installation specific requirements.

ADDITIONAL CRITERIA

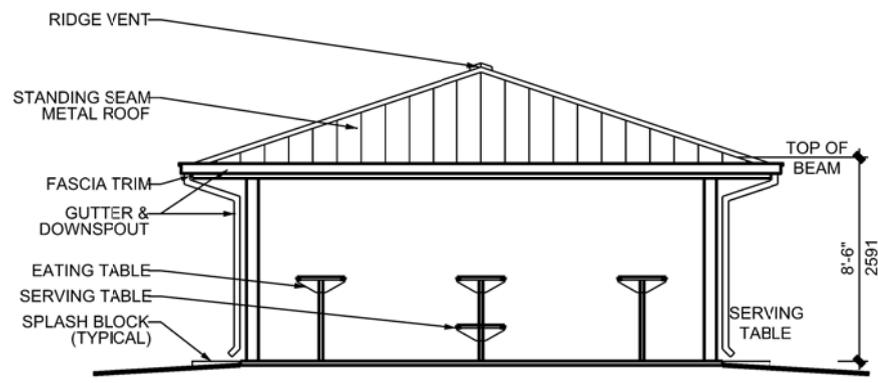
Refer to the Range Design Guide for additional information and requirements.



**FLOOR PLAN**  
SCALE: 1/8" = 1'-0"



**ELEVATION A**  
SCALE: 1/8" = 1'-0"



**ELEVATION B**  
SCALE: 1/8" = 1'-0"



Rev.	Description	Date	Approved

Designed by:	Date:	Rev.:
Drawn by:	Design file no.:	
Reviewed by:	Drawing code:	
Submitted by:	File name:	Plot name:
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE HUNTSVILLE, ALABAMA		
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RANGE AND TRAINING LAND PROGRAM  
STANDARD DESIGN MANUAL  
COVERED MESS

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