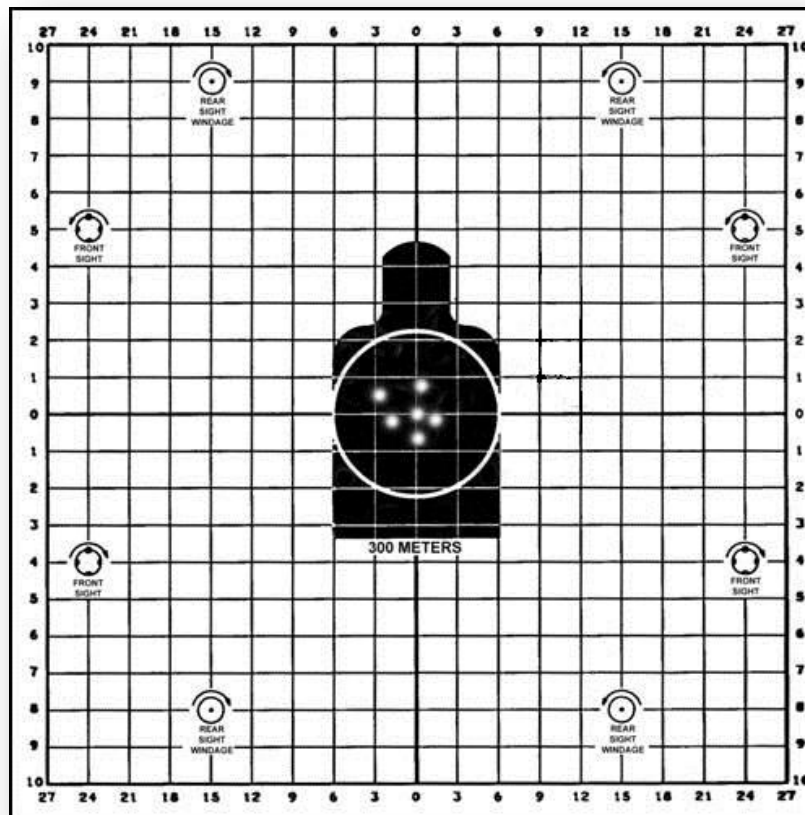




LOMAH



(Location of Miss and Hit)



RANGE AND TRAINING LAND PROGRAM – MANDATORY CENTER OF EXPERTISE

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Purpose

The Location of Miss and Hit (LOMAH) system is a range add on package that provides real time feedback to a shooter of the precise location of the round as it passes through/by the target. The components, when added to a standard Army Range, provide LOMAH capability for that range. LOMAH systems are not currently standard for SRP range projects. An approved exception to standard is required to LOMAH to an SRP funded project.

This section provides guidance on the additional infrastructure requirements needed to support LOMAH add on systems to a standard range project.

Design Requirements

Refer to the separate RDG Sections for the specific range design requirements.

General

There are a number of different styles of LOMAH systems; this section describes the most common type. The additional infrastructure (MILCON) required is independent of the type. The LOMAH system consists of a target sensor or “bar”, a firing sensor, a feedback monitor, and a computer in the control tower. The target bar, added to the target mechanism, is located inside the target emplacement. The firing sensor and feedback monitor are at the firing point on each lane. Normally, the material provider procures and installs all three of these parts of the LOMAH system using OPA funds, similar to the target system.



TYPICAL TARGET EMPLACEMENT WITH LOMAH BAR INSTALLED

Target Emplacement

The target bar is installed on a target mechanism inside a target emplacement. The standard target emplacement size will accommodate the target bar without any modifications. The target mechanism provides power and control for the sensor. The system uses a standard target

emplacement; there are no additional down range electrical power or communication infrastructure requirements for a LOMAH range.

Firing Line

The LOMAH system includes feedback monitors and firing sensors at each firing position along the firing line. MILCON or OMA funds provide the power and communications wiring infrastructure required for the LOMAH system equipment.

Below is an example of the equipment installed at a firing position that contains a LOMAH system. MILCON provides the slotted metal channel (Unistrut) stand, the power receptacle, and a conduit system connecting to the Control Tower. The OPA contractor provides the remainder of the equipment.

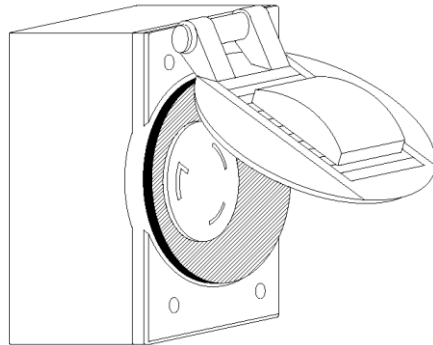


TYPICAL FIRING POSITION INSTALLATION

Power

Provide power to the LOMAH firing position equipment via a 120V, L5-20R power outlet. Feed no more than six (6) LOMAH power outlets on a 20-amp branch circuit. The LOMAH power outlet and weatherproof cover is the same as a target auxiliary outlet. Provide this outlet in a weatherproof FD box with a weatherproof in-use cover. The cover shall consist of an ethylene propylene rubber gasket around the face receptacle to prevent the entrance of dirt and moisture when the cover is open and a plug is inserted into the outlet. The outlet cover shall be spring

loaded to force the lid closed when no plug is inserted. The cover shall be sized to provide a weather tight connection for round barrel plugs with a diameter of 1.8” – 1.95”.



TYPICAL WET LOCATION LOMAH POWER OUTLET BOX

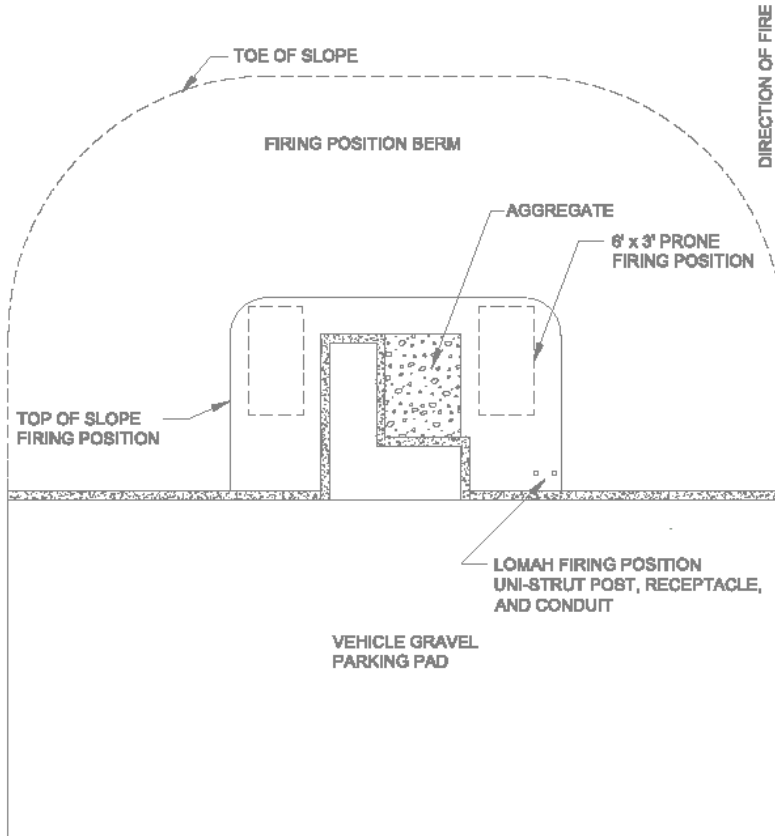
Conduit System

Install a conduit system from the control tower to each firing position. The LOMAH system vendor will pull the specific data cable through the conduit system that is required for their system.

The system consists of 1 ½” conduits from each firing position to a handhole at the base of the Control Tower. A 4-inch conduit routes from that handhole to the control room. Install one handhole for every three firing positions on the range. Cap each 1 ½” conduit at all firing position with an easily removable screw type cap for the installation of LOMAH communication cables. Provide a pull string in all conduits associated with the LOMAH system.

Equipment Stand

Install two, slotted metal channel (Unistrut) posts spaced 12 inches apart at each firing position. Anchor each post in concrete. Extend the stand 24” above finished grade. The standard location for the stand is at the rear of each firing position, to either the right or left of the firing position. Locate at the point where the firing position berm starts to slope down and away from the firing position. However, the location of this equipment must be carefully coordinated with the installation to ensure the LOMAH equipment will not interfere with training.



TYPICAL FIRING POSITION