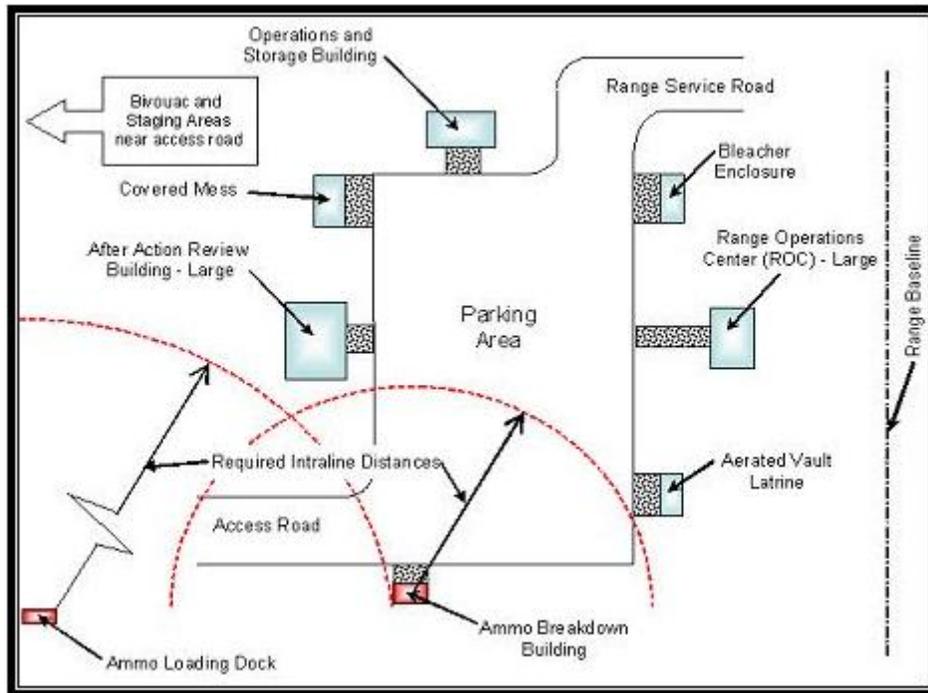


RANGE OPERATIONS/CONTROL AREA (ROCA) - ARMOR



Typical ROCA-Armor



Example ROCA-Armor Layout

General: The Range Operations and Control Area (ROCA) is the center for overall control and operation of the range, training exercises, administrative services, and support facilities. From the range operations and control area, downrange target and simulation equipment are operated and activities are monitored for scoring and performance data review. This data is then collected and distributed to the participants for an after-action

review. The following are the typical structures in the ROCA – Armor (refer to each specific range’s Narrative Description section to determine the buildings associated with that specific range): the Range Operations Center - Large (ROC-Armor), an Operations/Storage Building, an Ammunition Breakdown Building, an Aerated Vault Latrine, a Covered Mess, an After Action Review Building - Large, an Ammo Loading Dock, a Bivouac Area, a Unit Staging area, and a Bleacher Enclosure. The example ROCA is a sketch and is only a representative example. Site adaptation is always required. An intraline distance of 50ft/15m is required between the Ammo Breakdown Building and all other occupied buildings.

Anti-Terrorism/Force Protection (ATFP): HNC analyzed the ATFP requirements set forth in UFC 4-010-01 and determined that, typically, the standard complement of ROCA buildings are not considered to be inhabited, are within a controlled perimeter, have guard force access control in place and are generally not routinely occupied; therefore, no ATFP measures are required in a project design. However, ultimately the Garrison Commander is responsible for the facilities and may mandate application of ATFP provisions, particularly if the facilities are considered routinely occupied.

Sustainable Project Rating (SPiRiT): SPiRiT was developed to “help the Army to achieve facilities that meet the needs of current missions, and infuse new technologies and innovative sustainability concepts in the design and construction process to improve the quality of facilities to support soldiers; readiness, training and well-being,” (www.erd.c.usace.army.mil). This tool is realistically only for vertical construction; some criteria simply does not apply to or would not be cost efficient/practical to implement on downrange training areas. Therefore, training range projects are not required to achieve SPiRiT goals as established by Army policy. However, any climate controlled vertical construction (ROCA buildings) included in the range project shall be evaluated using the SPiRiT tool. While the designer should attempt to achieve a Gold rating, a specific level is not required. Documentation of the SPiRiT assessment shall be included in the project Design Analysis. The concepts of sustainable design will be included in the designs where possible.

Access Road: See Service/Maintenance and Access Road section.

Vehicle Parking Area: The ROCA-Armor should accommodate approximately three (3) full-size buses and approximately twenty (20) military or private cars. The designer must coordinate with the Range Control Office to determine installation-specific parking requirements. The parking area location must be planned based on the convenience and safety of walking troops.

Bivouac Area: This area will provide 6 concrete slabs on-grade with embedded metal posts to facilitate erecting GP Medium tents. Each tent will house 15 to 20 soldiers. The concrete slabs are sealed to be waterproofed and will have ground-fault electrical receptacles. Exterior lights will be mounted on the embedded posts. Each tent pad is 15ft by 25ft. The pads are spaced 10ft apart.



Bivouac Area

Siting Criteria. The bivouac area shall be sited just off the access road next to the staging area.

Lightning Protection. Lightning protection can be provided on a site-by-site basis determined by the installation.

Staging Area: The Unit Staging Area consists of a graveled tactical vehicle parking area capable of handling a maximum of 40 BCT-type vehicles. The assumed dimensions are 70 m x 17 m with 0.3m-thick aggregate surfacing. This area is surrounded with a grounded security fence due to vehicle on-board weaponry. The unit staging area can have optional pole-mounted lights surrounding the parking area (not included in the standard quantities estimate). If tanks are used in the staging area, this area will need to be designed using the Tank Trail Design section of this document.

Siting Criteria: The staging area will be sited just off the access road next to the bivouac.