

3.0 SITE ANALYSIS

3.1 Existing Site Conditions

The site for the P-707 MSAU HQ-BEQ building is located at the intersection of MCB4 and Browning Road, on the developed site that is currently Whaling Hall. The existing site is surrounded on the south by BEQ building P-545, the east and north by Browning Road, and the west by BEQ building P-621. The P-707 MCESEG building site is located south of the P-620 training facility. The P-707 MSAU HQ-BEQ and MCESEG Annex building sites are indicated in RFP concept drawing C-103.

Existing utilities in the vicinity of the project site include but are not limited to water mains, gravity and force main sanitary sewer, natural gas, fiber optic duct banks, overhead telecommunications, and overhead electrical.

The Contractor will coordinate with the government to provide fiber optic and copper cabling to the new MSAU HQ-BEQ and MCESEG Annex buildings (see Telecommunications Systems section of this report for detailed information). All exterior infrastructure for cable television and non-government telecommunications will be provided by the Contractor. The Contractor will be required to coordinate with private cable television and telecommunications companies on MCB Quantico regarding providing service to the new MSAU HQ-BEQ building.

The soils present on the site to ten (10) feet depth from the existing ground surface is loose silty material containing mica as indicated in the soil boring logs. It has been observed on the Marine Corps Base that it is very difficult to work with silt soils containing mica, the Contractor shall take this into consideration in his bid and be prepared to remove and replace such soils or stabilize in place such soils with any means or methods as deem fit by his Geotechnical Engineer. The Contractor's Geotechnical Engineer shall perform additional subsurface investigation/testing as required to adequately determine all applicable geotechnical factors including the type and capacity of the project foundations. The Contractor's Geotechnical Engineer shall prepare a report as described in other portions of this RFP. The minimum requirements for the subsurface investigation and report are as required by UFC 1-300-09N with associated references.

A topographic survey of the project site was performed in May 2015 and November 2015. An existing conditions drawing has been created from the topographic survey and is included in Part 6 of this RFP. The topographic survey has been provided to show the location of the existing facilities, areas of new work required by this RFP and the character of the site. The Contractor shall conduct appropriate location and topographic surveying as required to design all elements of required project. The Contractor shall verify the location of utilities prior to construction.

3.2 Site Development Requirements

The site layout shall be as indicated in Part 6 of the RFP.

This project includes a multi-story MSAU HQ-BEQ building and single-story MCESEG Annex building to accommodate living space for Marine Corps bachelor enlisted personnel. The building layouts shall be laid out in a way that will consolidate and minimize utilities and maximize best use of the site. The BEQ shall feature the following exterior facilities: trash receptacle, athletic training area, and a weapons cleaning canopy.

Utility connections shall work to support the new P-707 MSAU HQ-BEQ and MCESEG Annex buildings, grading and storm drainage collection shall be accomplished within the specified limits.

The parade deck will be a plaza to accommodate 300 people in formation. The plaza will be stamped concrete and shall be designed for emergency access. Ceremonies such as changes in command and welcoming of dignitaries will take place on the plaza. The plaza will serve as the central access from the

security turnstiles in the front of the building to the front door. The plaza should be inviting while serving the function of the ceremonies and emergency access.

Provide approximately 6,000 SF athletic training area for hand-to-hand combat training and other fitness activities. The training area is designed in three (3) compartments for breakout training or group instruction. The intent of the surfacing comes from that of playground design, allowing adequate cushioning of falls while maintaining traction.

3.2.1 Building Layout

The building layout shall be as shown in the attached plans. Any deviation from the building layout requires Government approval.

3.2.2 Site Signage

Provide site signage for the new facility in compliance with Marine Corps Base Exterior Architecture Plan (BEAP) and the Federal Highway Administration Manual of Uniform Traffic Control Devices (MUTCD).

3.2.3 Site Utility Requirements

Provide domestic water, sanitary sewer, storm sewer, electric (power and site lighting), telephone and cable television services. Points of connection shall be as indicated on the drawings or as approved by the Contracting Officer. Unless otherwise specified, all utility services shall be run underground, and shall not be run under or within 10 feet of buildings except as required to make building connections.

3.2.4 Stormwater Management

A preliminary stormwater management plan is included in the plans in Part 6 of this RFP. Specific requirements for stormwater management are outlined in Section G3030, Storm Sewer.

Provide stormwater management designed to comply with the Virginia DCR Stormwater Management Handbook. The Contractor shall contact MCB Quantico Natural Resources and Environmental Affairs Branch (NREAB) to discuss current and future condition of the site and stormwater discharge restrictions.

Provide detailed location and as-built surveys of all installed stormwater BMPs, including a detailed operations and maintenance plan for each BMP with associated periodic inspection checklists for NREA and FMS approval.

3.2.5 Equipment Washdown

Provide exterior equipment washdown areas on two sides of the BEQ, south of the athletic training area and adjacent to the weapons canopy. The washdown areas must be concrete, 2.44 m (8 ft.) in diameter with a centrally supported standpipe consisting of six (6) showerheads with cut-off valves suitable for simultaneous operation of all six (6) showerheads. Provide a properly sized supply standpipe with a freeze-proof design and easily accessible shut-off valve(s). Concrete area will be sloped to a central drain. All equipment will be suitable for outside service. Refer to ESR D201005 for additional detail.

Provide an enclosed equipment drying area on concrete hardstand adjacent to the equipment washdown area adjacent to the weapons canopy. Drying areas must be totally enclosed on all four (4) sides and across the top with chain link fence fabric. Fence fabric must be adequately supported by fence posts and support members to withstand a hanging equipment load of up to 732 kg/m (150 lb./ft²) from the top of the structure. The drying area must be divided into three (3) separate sections with one pedestrian gate per section. Each gate must have a lockable hasp. Each of the three (3) sections must be 2300

mm x 6400 mm x 3000 mm (90 in x 252 in x 118 in) high. The concrete hardstand will be adequately sloped to prevent ponding water.

3.2.6 Permitting

It is the Contractor's responsibility to ensure that all permits necessary for construction have been secured prior to beginning construction. The Contractor is responsible for all permit application fees.

Contact MCB Quantico (NREA), Air Program Manager, 703-784-4030, if any temporary or permanent fuel-fire water heaters and/or electrical generators will be used during the construction.

Apply and obtain a Virginia Stormwater Management Program (VSMP) general permit for construction activities at least 14 days prior to land disturbing activities. Stormwater permits include the requirements that a Stormwater Pollution Prevention Plan (SWPPP) be developed for the permitted facility.

The Contractor shall submit Stormwater Management Permits to NREA for review and approval. The review and approval period of 45 days shall be included within the construction schedule. After approval by NREA, it is forwarded to DEQ for a possible 75-day initial review. If re-review is necessary, an additional 45 days may be required.

3.2.7 Wetlands and Stream Channel Impacts

There is an ephemeral stream channel and associated jurisdictional wetland area noted on project plans adjacent to the proposed MCESG Annex Building. Development of the MCESG Annex will require removal of approximately 20 mature trees over 12-inches in diameter and general clearing of approximately 1.75 acres to conduct site grading, install utility connections, and construct the building. This will require clear cutting of all trees, brush, shrubs within the limits of disturbance shown for the MCESG Annex and associated stormwater management features. All tree removal shall be coordinated with MCBQ Environmental staff through the Contracting Officer and shall be conducted in accordance with emerging guidelines and standards applicable to protection of bat species.

This area contains an ephemeral stream channel and associated wetland area as documented in Part 6 of this RFP. The contractor shall obtain appropriate water quality and wetland impact permits prior to conducting any activities in this area. The contractor shall pay the cost of and obtain any required off-site mitigation credits required for construction impacts on the project. This shall include compensatory mitigation for construction of all proposed improvements including on- and off-site utilities, stormwater management areas, and general site improvements. Construction scheduling shall reflect appropriate time to obtain these permit approvals which can extend in excess of 270 days. All wetland and water quality permitting (state and federal 401/404 program permits) shall be coordinated through the MCBQ Public Works NREA division.