**6. ENGINEERING SYSTEMS REQUIREMENTS**

**F10 SPECIAL CONSTRUCTION**

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SYSTEMS REQUIREMENTS  
SPECIAL CONSTRUCTION TEMPLATE 02/18  
  
Instructions for using this template: There are template files for each UNIFORMAT Level 2 Group Elements. This template is for Group Element F10-SPECIAL CONSTRUCTION. Text such as this is hidden text that will not print when the hidden text box in "Print/Options" is un-checked.  
   
The Architectural or Structural Member must edit this template for the requirements of the project. The SYSTEMS REQUIREMENTS are intended to define items that are required throughout the facility or on a system wide basis that is common to several rooms. Room-specific requirements are defined in the Part 3 Chapter 5 ROOM REQUIREMENTS section. Coordinate with the lead programmer for ROOM REQUIREMENTS. Editing is required where brackets [ ] appear. Delete all building elements that are not required for the project. If additional elements or sub-elements are required for the project that do not appear in the template, refer to the NIST UNIFORMAT II publication for additional building element numbers and descriptions. The Uniformat II Work Breakdown Structure can be found at** [**www.wbdg.org/ndbm/**](http://www.wbdg.org/ndbm/) **. Coordinate with the PERFORMANCE TECHNICAL SPECIFICATION SECTION F10 to ensure that performance requirements are provided for all of the Building Elements listed here and that paragraph numbering matches.  
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NOTE: Edit the following paragraphs to suit the project, or create your own, to describe the SPECIAL CONSTRUCTION for the project. Special construction that is typically included in a construction contract includes pre-engineered metal buildings, cold storage rooms and buildings, sound conditioned rooms, shelters and booths, bullet-resistant protection, radiation protection, grandstands and bleachers, swimming pools, and other special structures typically specified in Division 13 of CSI Masterformat. Coordinate this section carefully with other portions of the RFP.  
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**SYSTEM DESCRIPTION**  
Special Construction includes special structures such as pre-engineered buildings and [sensitive compartmented information facilities (SCIF)].

**GENERAL SYSTEMS REQUIREMENTS**  
 **F1010 SPECIAL STRUCTURES**

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NOTE: A pre-engineered metal building is an undesirable form of construction for an aircraft hangar and should only be utilized for small facilities. All hangars of the standard sizes described in UFC 4-211-01, *Aircraft Maintenance Hangars: Type I, Type II and Type III*are beyond the practical limit for PEMB construction. Consider one of the following paragraphs for facilities that will include a pre-engineered metal building.   
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**F101001 METAL BUILDING SYSTEMS (PRE-ENGINEERED)**

Provide the building foundation and other systems in accordance with Unified Facilities Criteria (UFC) 3-301-01, *Structural Engineering*and UFC 4-211-01, *Aircraft Maintenance Hangars*.

Pre-engineered metal buildings used for aircraft hangars must comply in all regards with the requirements of traditional construction.

[Provide a pre-engineered metal building for [\_\_\_\_\_\_\_\_\_]. Refer to UFC 3-101-01, *Architecture*for thermal resistance requirements for building enclosure.

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NOTE: Determine the open-space requirements and column spacing for the facility. Consider the programmed size, height, and the budget restraints. Determine requirements for cranes or other loads suspended from the structure. Determine the size and types of door and window openings into the building. Based on those considerations, determine the most viable system for framing the building. \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

[The building must be [\_\_\_] feet (meters) long by [\_\_\_] feet (meters) wide, with an eave height of [\_\_\_] feet (meters) high. The bay spacing must be [\_\_\_\_] [to accommodate] [\_\_\_\_\_\_\_].]

[The framing system for the steel structure must be in accordance with American Institute of Steel Construction (AISC) 325 and the Metal Building Manufacturers Association (MBMA) Metal Building Systems Manual, except that end frames may be of rigid frame or beam and column design.]

See ESR A10 and B10 for structural loading data and requirements.

See ESR D10 for the Weight Handling Equipment and load requirements for the structure to accommodate.

--End of Section--