

**ANNEX 5.7**  
**FACILITY INSPECTIONS PROGRAMMED AND PLANNED MAINTENANCE**

**5.7.1 Annex Description**

This Annex identifies the requirements for the annual visual inspection of the structures, facilities, utilities, systems and subsystems (SFUSS) at Stennis Space Center (See 5.1.2) to meet the intent of **\*\*NHB 8831.2A\*\***. The results of the inspection are compiled and summarized in the Backlog of Maintenance and Repair (BMAR) databases. The BMAR databases shall also contain all equipment and facility systems that are no longer economical to repair or are within 5 years of expected service life. There are two databases, one for facilities and equipment within the Test Complex and the second for institutional facilities and equipment. The BMAR database shall then be used as a basis for the Annual work plans, from which the planned maintenance projects are funded.

This Annex also identifies specific maintenance that occurs on a recurring cycle of one or more years.

**5.7.2 Definition of Terms**

- a. **Backlog of Maintenance and Repair (BMAR):** The unfunded facilities maintenance work required to bring facilities and collateral equipment to a condition that meets acceptable facilities maintenance standards.
- b. **Collateral Equipment:** See definitions in Annex 5.1.
- c. **Common Use Areas:** Facilities and/or portions of facilities, to which access is afforded and which are constructed, maintained and operated specifically for, but not incidental to, the benefit of all SSC residents. Common use areas include entry and hallways, stairs and stairwells, restrooms, and vending areas within dedicated facilities. Access restrictions, for security or other reasons, does not alter this definition.
- d. **Equipment:** For purposes of this annex equipment is defined to mean collateral equipment.
- e. **Facilities:** A facility is an enclosed structure to protect personnel, material or equipment from the elements and provide associated work or storage space. For purposes of this contract, a facility includes the utility systems inside the building/structure and extends five feet from the facility or as otherwise defined.
  - (1) **Architectural.** Includes (interior/exterior): doors; windows; flooring (coatings and coverings); stairs and stairwells; interior walls, ceilings, and partitions
  - (2) **Structural.** Includes foundation; structural system; building shell; roof; external attachments (e.g. walkway covers, overhangs, loading docks, etc); and facilities water collection and drainage system.
  - (3) **Electrical.** Includes: electrical wiring and lighting, hardware, and panels; power for equipment up to the point of disconnect, grounding or lightning arresting systems; alarm systems and communication equipment (excluding telephones).
  - (4) **Mechanical.** Includes all equipment, components and controls associated with the following systems as well as components located outside the facility: HVAC; plumbing; compressed air; steam; fire suppression; gas; boilers, furnaces; and generators.
  - (5) **Building Specialty.** Includes: installed equipment within the facility such as food service and processing equipment;

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appliances; elevators; automatic doors; roll-up doors; blast doors; vehicle gates; waste disposal equipment; shop equipment and hoists.

- f. Institution or base: For purposes of this contract Institution and Base are used interchangeably. Institution refers to those facilities and equipment that are in the fee area, west of a line parallel to and 1000 feet west of D road and excludes all Test Complex structures, facilities and utilities, and the Army Complex.
- g. Planned Maintenance Projects: A project which is approved and funded for a fiscal year as a result of the comprehensive inspection process (5.7.3.2 - 5.7.8) or as designated by the CO.
- h. Structures: A structure is a constructed unit established for a designated objective. Structures that are part of or inside a facility are included with the facility For purposes of this contract, structures are generally described as:
- (1) Allowing pedestrian and vehicular transportation. Includes roads and parking areas, paved or gravel surfaces, curbs, shoulders, guard rails, medians, wheel stops, walkways, bridges, sidewalks, and associated hardware.
  - (2) Preventing access and maintaining privacy. Includes fences, gates, barbed wire, grounding systems, planters, bollards, chains, and associated hardware and attachments.
  - (3) Retaining or directing natural elements. Includes culverts, drainage systems, gravity storm water systems, retaining wall, bulkheads, landscaped borders, head walls, rip rapped areas,

retention/detention ponds, spillways, canals, navigational lock, catch basins, and oil/water separators.

- (4) Providing information. Includes signs, pavement markings, flag poles, displays, historical markers, monuments and associated equipment.
  - (5) Other. Boat ramps, docks, landfill, and associated equipment.
- i. Test Complexes: For the purpose of this contract, all facilities, equipment and land east of a line parallel to and nominally 1000 feet west of D road and extended to the ARMY complex.
- j. Utility Systems: A utility is a system for collecting or distributing services between a common point and specific locations both above and below ground. See Annex 5.1, Table 5.1-1 for descriptions of utility systems.

**5.7.3 Inspections**

**Limitations and Restrictions**

Inspection of interior architectural systems in a facility is restricted to common use areas in Resident Agency occupied buildings.

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| 5.7.3.1         | <p>DR 5-FA03</p> <p>Develop a comprehensive inspection plan and schedule. Update the schedule annually and whenever changes occur. DR 5-FA03</p> <p>Provide a separate schedule for the Test Complex and the base.</p> | <p>The Contractor shall develop an inspection plan and schedule for all SFUSS. The plan shall include inspection criteria, in the form of checklists, specific to the system being inspected.</p>   | <p>1 Plan</p> <p>2 schedules – one for the Test complex and one for the Institution.</p>   | <p>Provide the plan and schedules to the CO within 60 days of contract award.</p> <p>Updates shall be submitted to the CO annually, thereafter and 15 days prior to any change in the schedule.</p> |
| 5.7.3.2         | <p>Conduct an annual inspection of SFUSS in accordance with the inspection plan and schedule defined in 5.7.3.1.</p>   | <p>The purpose of the inspection is to obtain maintenance and repair information. This inspection shall not relieve the Contractor from establishing and implementing a continual inspection program for the timely identification of an occurrence of maintenance and repair work within the scope of this contract.</p> <p>Conduct a thorough visual inspection of each and every component of the required system, entering all accessible areas including crawl spaces, manholes, suspended ceilings, etc. The inspection shall include code compliance issues. Identify all work necessary to bring the structures, facilities and utilities into compliance with health, fire, and safety codes.</p> <p>Individuals conducting inspections shall be technically knowledgeable of the system being</p> | <p>Contractor determined.</p> <p>Extent of SFUSS to be inspected is found in the following:</p> <p>SORD drawings located in the CEF</p> <p>Exhibit 8 of this Annex</p> | <p>All inspections shall be completed no later than 1 February of each year</p>   |

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|                 |   | inspected.   |  |   |
| 5.7.4           | Record deficiencies on Facility Inspection Sheets and the Backlog of Maintenance and Repair (BMAR) databases. | <p>All deficiencies identified during the course of the inspections shall be recorded on Facility Inspection Sheets, Figures 5.7-1 and 5.7-2, and summarized in the existing institutional and test complex BMAR - databases and where indicated in this annex, on drawings. ROM estimates shall be provided and will be used for planning purposes only.</p> <p>See Exhibit 7 of this annex for a description of the BMAR database and field values.</p> <p>Review pertinent data/information sources such as maintenance history files, logs/reports, maintenance technicians, etc to ascertain overall condition and maintenance trends (equipment replacement, re-roofing, flooring replacement, paint, etc) and incorporate in the BMAR databases those structures, facilities, utilities, systems and equipment that should be replaced or that are within 5 years of expected service life. The Facility Inspection Sheet shall be used to document each record in the database. (DR 5-FA03)</p> <p>The Contractor shall remove duplicate records from the databases prior to submitting to the government.</p> | <p>Contractor determined</p> <p>Previous BMAR databases and Facility Inspection Sheets are available in the TRL.</p> | <p>Submit Facility Inspection Sheets and supporting documentation such as drawings and inspection checklists, within 5 days of each inspection.</p> |

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| 5.7.4.1         | Update the BMAR databases                              | As work identified in the BMAR is accomplished the corresponding record shall be removed from the active database and archived.   | Nothing additional   | The BMAR databases shall be available for review on request.   |
| 5.7.4.2         | Record defects on drawings                             | <p>Defects identified in the course of conducting the annual inspection shall be recorded on drawings for the following structures, facilities and utilities:</p> <p>Roofs<br/> Roads<br/> Parking Areas<br/> Sanitary Sewer Collection System<br/> Storm Water Collection System</p> <p>Roof drawings reside in the ROOFER database. The ROOFER program is government owned software that is used to manage roof maintenance.</p> <p>Drawings for the other systems are generated by the Contractor to identify the location and specific information relating to the nature of the defects.</p> | Nothing additional   | Provide as supporting documentation as indicated in 5.7.3  |
| 5.7.5           | Prioritize and submit the BMAR databases as indicated. |   |  |  |
| 5.7.5.1         | Provide Maintenance Planning/Test Complex (DR 5-FA01)  | The Contractor shall prioritize those projects in the Test Complex BMAR database that should be considered for funding in the following fiscal year. Selection should take into consideration; mission impact, length of time a project has been deferred,  | <p>1 Planned Maintenance Plan – submitted annually</p> <p>1 Five Year Plan –</p> | Submit the Annual and Five Year Planned Maintenance Plans and the BMAR database no later than March 1 of |

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| 5.7.5.2         | Provide Maintenance Planning/Institutional (DR 5-FA06) | <p>and priority.</p> <p>Annual historical budget: \$1,000,000</p> <p>The Contractor shall project requirements for Planned Maintenance Projects for five years. The Contractor shall prioritize the projects in each system. In addition, the contractor shall determine an overall ranking in order to establish the Annual Planned Maintenance Plan. Selection should take into consideration; mission impact, length of time a project has been deferred, and priority.</p> <p>Annual historical budget: \$800,000</p> <p>All BMAR projects fall within the following systems (SYSTEM is a field in the BMAR database with specific designated values – see Exhibit 7).</p> <p>Roofs<br/> Sidewalks<br/> Roads and Parking Lots<br/> Sanitary and Storm Sewer Systems<br/> Hi-voltage System<br/> Electrical systems<br/> Exterior Paint<br/> HVAC<br/> EMCS<br/> Natural Gas Systems<br/> Perimeter and Security Fencing</p> | <p>submitted annually<br/> BMAR database,<br/> current as of March 1<br/> of each year</p> <p>1 Annual Planned Maintenance Plan –<br/> submitted annually</p> <p>BMAR database,<br/> current as of March 1<br/> of each year</p> | <p>each year in an electronic spreadsheet format that is compatible with SSC site standards.</p> <p>Submit the prioritized BMAR database and recommended Annual Planned Maintenance Plan in an electronic spreadsheet format consistent with SSC site software standards no later than March 1 of each year.</p> |

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|                 |  | Mechanical Systems<br>Architectural  |   |  |
| 5.7.6           | Provide cost estimates for each planned Maintenance Project approved by the government for the following fiscal year | The government will evaluate the Contractor's recommendations and will notify the Contractor which projects are approved for design and detailed cost estimate by May 1 of each year.  | The Contractor shall cost the design and estimate of Planned Maintenance Projects based on the following historical budgets:<br><br>Test Complex:<br>\$1,000,000<br><br>Institution:<br>\$800,000 | Estimates for each project shall be submitted no later than August 1 of each year.   |
| 5.7.7           | Programmed Maintenance   |  |   |  |
| 5.7.7.1         | Develop and maintain data base which accurately defines each Programmed Maintenance Task                             | Programmed maintenance shall be identified, classified as to frequency required, and a traceable record of accomplished tasks maintained. Programmed maintenance tasks shall be submitted to NASA Technical Operations Office at the start of each fiscal year for review. | Institution: Tasks/year<br>Dependant on funding   | Data base shall be updated monthly and be available for NASA review. Data base shall be developed and become part of the Contractor's maintenance program within 60 days after contract award. |
| 5.7.7.2         | Annually, update the Programmed  | By the start of each Fiscal Year, the Contractor shall   | 1 Task  | All New and Modified   |

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|                 | Maintenance data base to include new or modified installations and equipment | have an approved list of Programmed Maintenance items that will be accomplished during that Fiscal Year  |  | facilities, systems, equipment, and sub-systems shall be included in the data base by the October 1.<br><br>Planned Projects shall be submitted to NASA for review in accordance with item No. 5.7.5.1. All approved projects will be completed and costed during the fiscal year. |
| 5.7.8           | Accomplish Planned Maintenance Projects.                                     | Annually, the Contractor shall develop a list of planned maintenance projects and submit the list to the CO for NASA review and approval. The list includes all planned projects for Institution and a separate list by Program for the various Test complexes. On completion of the NASA review, and the assignment of appropriate funding, the Contractor shall implement each of the projects in accordance with a schedule developed by the Contractor. All projects on the list will be completed and costed during the fiscal year unless a waiver is given. | Historical Annual Planned Maintenance Program<br><br>Test Complex:<br>\$1,000,000<br>Institution:<br>\$800,000 |  |
| 5.7.9           | Accomplish Demand Planned Maintenance Projects.                              | Implement modifications, repairs, maintenance projects as defined by SWR for NASA programs, resident agencies and construction of Facilities (CoF) support. Average 54.hr.task based on historical information.  | Minimum 1500 tasks<br><br>Maximum 1900 tasks   | All approved projects shall be completed and costed in accordance with the Stennis Work Request. Documentation completed as required by SSC standards. Satisfied   |

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