

NASA Langley Research Center
Multiple Award Construction Contract
Draft Requirements Document

I. Background

The NASA Langley Research Center (LaRC) site is approximately 788 acres. Buildings range from large wind tunnels, clean rooms, laboratories, office complexes to warehouses. The current square footage (SF) of LaRC facilities is approximately 3,585,153 gross SF. Buildings range in size from 60 SF to 177,000 SF. Infrastructure systems include underground utilities, airfield pavements and taxiways, roadways, sidewalks and parking areas. The LaRC Real Property Inventory has 276 line entries that correspond to buildings and or real property assets which cover buildings and infrastructure systems.

This draft requirements document defines the requirements for the LaRC Multiple Award Construction Contract (MACC) for NASA LaRC and NASA resources located on and adjacent to Langley Air Force Base, Hampton, Virginia. NASA LaRC must provide a comprehensive construction program to ensure facilities are fully operational and safe for NASA LaRC to carry out its mission. The Contractor shall be responsible for the execution of the MACC performance requirements defined in this draft requirements document.

Generally, the task order documents are designed by an Architect/Engineer (A/E) consultant under a separate NASA contract. The Government will generally provide a set of engineering drawings, which together with the LaRC MACC Construction Specifications constitutes a typical bid package. The Government may provide a list of performance requirements and request the contractor submit a technical proposal on smaller less complicated projects.

Awardees shall be required to submit monthly status and schedule updates for their projects to the Contracting Officer's Representative (COR). In addition, periodic meetings will be held by the Government to discuss administrative matters with the awardees, as well as possible adjustments or improvements to the task order process. Awardees are strongly encouraged to offer candid feedback in an effort to continuously improve the process and thereby benefit both the Contractor and the Government.

II. Scope of Work

The Contractor shall furnish all materials, labor, equipment, management, coordination and quality control necessary for the performance of construction, modification, repair and rehabilitation of facilities at LaRC. This will predominantly involve work at the NASA Langley Research Center, Hampton, Virginia, and Langley Air Force Base, Hampton, Virginia.

The facilities consist of, but are not limited to, office buildings, shops, laboratories, wind tunnels, highly technical research facilities, clean rooms, spacecraft & instrument test and integration areas, storage areas, utility buildings, interior and exterior utility systems and site improvements.

Services under this contract shall be furnished on an as-needed basis, in response to task orders that are issued. All work shall be accomplished in accordance with the LaRC MACC Construction Specification and the task order project drawings or work description documents.

The work included may be described as new construction, modification, or rehabilitation of facilities, varying from routine general construction to installation of complex special test or

laboratory systems. It may include work on building interiors and exteriors, including, but not limited to, architectural, structural, electrical, mechanical, environmental, and fire protection/detection. It may also include civil site work, and both underground and surface site utility system work.

Each task order will clearly define the work required. The Contractor shall accomplish construction task orders within the schedule set forth in the task order.

III. Contract Project Management

The Contractor shall provide the overall management control of its employees, subcontractors and equipment. The Contractor shall designate a single Senior Construction Manager to be the single point of contact, for the duration of the contract with the government, for coordinating task orders and this Senior Construction Manager shall meet regularly with the COR and Contracting Officer (CO) to review the status of the tasks.

In the event that the Contractor is awarded concurrent multiple task orders under this contract, project management shall be performed as follows: the Contractor may employ multiple Construction Managers for the day-to-day administration of each task, but one Senior Construction Manager who is familiar with all tasks shall be designated as the lead point of contact with the Government as outlined above.

The Contractor shall evaluate the task orders and overall workload to establish staffing needs and schedules, assign qualified personnel, and continually assess the progress. The Contractor shall establish, document and maintain a quality control program. The Contractor shall be responsible for the resolution of all technical, cost and schedule issues to ensure that quality work is accomplished on schedule.

The Contractor shall provide monthly progress/status reports which shall include a narrative of major accomplishments, progress during the month and the completion date. The reports shall include a description of the overall progress of work, issues and concerns that may impede performance, and proposed corrective actions, as well as an overview of work forecasted for the future month and the backlog. The Contractor shall also report on work quality, skill management, and process improvements. These monthly reports are separate from the requirement to participate in regular Project Progress meetings. The Contractor shall supply sufficient administrative and clerical support to accomplish the work described herein in a proficient and timely manner.

IV. Construction Services

A. Overview

The LaRC pursuits in the areas of Aeronautics, Science, Space Technology, Human Exploration and Education are always time-critical and of a highly visible nature. Therefore the Contractor shall be required to respond rapidly to Government requirements with top quality craftsmanship and without compromising safety standards, configuration control, operational readiness, etc. It is imperative that the Contractor provides a flexible and multi-disciplined workforce of the highest quality.

B. Contractor's Management and Supervision

Contractor effort may extend beyond conventional, single job construction effort, in that the Contractor may be implementing simultaneous task orders. The Contractor shall plan, schedule, coordinate, manage, and execute a consistent and timely flow of work with a wide variety of crafts and skill levels. The Contractor shall be capable of adjusting to a wide variation in the craft mix without significantly impacting on-going work. The Contractor shall select quality subcontractors necessary to perform elements of work for which there is insufficient or no in-house capability, and effectively manage those subcontractors to ensure that the Government is provided with a "seamless" effort on each task order.

The widely varied nature of construction work at LARC requires a strong and effective joint effort with the Government and other contractors. The Contractor's management/supervision will interface with the Government through the CO and more specifically on a day-to-day basis through the COR or the Project Manager (PM). Work authorization, scheduling work during research operations, scheduling utility outages, and task order closeout are just some of the examples of the need for close coordination. Only formally designated Government representatives (as designated by the CO) will direct or otherwise control the construction effort under this contract.

The Government may undertake or award other contracts for additional work or related work at or near the site of work performed under this contract. The Contractor shall fully cooperate with other contractors and Government employees and shall carefully adapt scheduling and performing of work under this contract to accommodate the work by others, heeding any technical direction that may be provided by the COR.

C. Quality Control Program

The Contractor shall provide Quality Control services as an integral part of construction activities. LARC MACC Construction Specifications will contain detailed requirements that shall be implemented through the Contractor's Quality Control Program.

The Quality Control Program shall consist of plans, procedures, and organization necessary to address project specific quality issues and to ensure adherence to plans and specifications, standard workmanship practices, and NASA and industry standards. The Quality Control System shall include maintaining shop drawing files and ensuring that materials used and their installation are as approved by the Government. Contractors shall use the 3-phase Contractor Quality Control system on all projects and follow the independent Quality Control manager requirement.

The capability to conduct tests to ensure that construction materials and workmanship meet specifications is essential. The Contractor shall witness/monitor/approve tests including overall test procedures for tests by independent testing agencies, or conduct tests including laboratory and field analysis of soils, concrete, paving materials, aggregates, general construction materials, HVAC balancing, mechanical and electrical systems, etc.

Quality Control administration duties include the monitoring of construction progress, review of overall schedules and maintaining daily logs, etc. Managing the as-built drawing process is vital to ensure that accurate documentation of the construction is received and provided to CMOE configuration control personnel.

The Government will provide construction quality assurance inspections independent of the Contractor's construction quality control program. The Government's inspection does not relieve the Contractor of any responsibilities or duties under this contract.

D. Safety and Environmental Program

Construction work shall be monitored to ensure full compliance with all applicable safety and environmental codes, regulations, specifications, etc., including the contractor safety and health plan, Occupational Safety and Health Administration (OSHA) regulations and NASA/LARC specified safety and environmental procedures. Environmental requirements include, but are not limited to, Langley Policy Directive (LAPD) 8500.1 LaRC Environmental and Energy Management and Langley Procedural Requirements (LPR) 8500.1 Environmental and Energy Program Manual. Safety requirements include, but are not limited to, LPR 1710.10 Fire Protection Program and LPR 1740.2 Facility Safety. The Contractor shall strictly adhere to LARC safety and environmental requirements. Safety training shall be required for all, especially for those employees involved in construction activities.

E. Responsibilities

Whether a project is subcontracted, self-performed, or a combination, the Contractor shall at a minimum provide the following services associated with the construction effort:

- Management of all construction work under this contract on a daily basis;
- Quality management of subcontractors with regard to project schedule, work quality, change orders, and safety;
- Initiate security badging for the Contractor's employees and subcontractors to access LARC facilities;
- Retain the required bonds as stipulated in the contract;
- Evaluate subcontractor quotes on project proposals and modifications as necessary, to ensure fair pricing;
- Attend and participate in pre-construction meetings, regular progress meetings and any applicable Quality Control meetings;
- Provide and monitor construction schedules and provide status reports as requested; Coordinate construction schedule with the PM, subcontractors, and the Quality Assurance staff;
- Serve as point-of-contact for field resolution of construction problems;
- Prepare proposals in response to construction Request for Task Plans and modifications;
- Schedule and participate in Operational Readiness Reviews (ORR's) as required, including commissioning and activation reviews;
- Prepare and resolve punch lists;

- Verify with Government that all work is properly performed and all deliverables received;
- Provide As-built red-line drawings to the Government;
- Maintain electronic records including: submittal logs, quality control records, schedule, correspondence, shop drawings, Request for Information's (RFI)'s and responses, and modifications;
- Coordinate inspections with Quality Assurance personnel;
- Manage the Contractor safety program including compliance with OSHA requirements and specific LARC safety requirements;
- Adhere to environmental standards, including compliance with Federal, state and local requirements and specific LARC environmental requirements;
- The Contractor shall ensure all work is in accordance with the task order, the LaRC MACC Construction Specification and the LaRC and NASA policy directives as of the award date of the task order.
- Coordinate with COD Project Manager, Building Managers, Facility Operation Managers, Quality Assurance personnel, Operations & Maintenance personnel, and other COD contractors on various issues including, but not limited to, work in occupied areas, work permits, utility outages, Utility Control System (UCS) coordination, task closeout and security clearances.

The individual Sections of the LaRC MACC Construction Specification contain more detailed requirements for specific performance criteria as is appropriate for varying projects.

(End of Draft Requirements Document)