



DEPARTMENT OF THE NAVY

NAVAL POSTGRADUATE SCHOOL
1 UNIVERSITY CIRCLE
MONTEREY, CA 93943-

IN REPLY REFER TO

JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION

Upon the basis of the following justification, I as Contracting Officer hereby approve use of the other than Full and Open competition for the proposed contractual action pursuant to the authority of 10 USC 2304(c)(1), only one responsible source and no other supplier or servicing activity will satisfy agency requirements, as implemented by FAR 6.302-3.

1. Contracting Activity

Naval Postgraduate School
Department of Contracting and Logistics
1 University Circle
Monterey, CA 93943

2. Description of the Action Being Approved

This justification covers the procurement of services for unique professional support from Lockheed Martin in the continued investigation of segmented mirror systems and improvement of the capabilities of such systems for various DoD applications by the Mechanical and Aerospace Engineering Department. This justification for other than full and open competition will be posted at the Government wide Point of Entry.

3. Description of Supplies/Services

The Adaptive Optics Center of Excellence (AOCoE) for National Security is a research center located at the Naval Postgraduate School, sponsored by the Office of Naval Research (ONR), the National Reconnaissance Office (NRO) and the Air Force Research Laboratory (AFRL). The center conducts research in adaptive optics related to national security issues.

The AOCoE requires services from recognized experts to review its programs, offer technical assistance to address critical research issues, and provide technical and consulting support for the Segmented Mirror Telescope (SMT) and distributed satellite systems. The vendor, Lockheed Martin, is needed for the following tasks:

- Support of the Shack-Hartmann and Phase Diversity Sensors
- Support of aft-mounted interferometer
- Support of the SOTA equipment
- Software support
- Assist government in aligning sensor suite to the SMT

At the end of this support contract, Lockheed Martin will deliver a report based on research findings and consultations. The estimated cost for this support is [REDACTED] for the base year [REDACTED] including two option years).

4. Statutory Authority Permitting Sole Source

6.302-3 -- Industrial Mobilization; Engineering, Developmental, or Research Capability; or Expert Services.

5. Rational Justifying Use of Cited Statutory Authority

The SMT is a state-of-the-art segmented mirror system developed over the past several years. The proposed vendor has been identified as the only company which can provide the requested technical support regarding SMT technology, as the vendor has directly participated and led previous development efforts for this specific hardware. The vendor has experience with SMT hardware and software pertaining to telescope and sensor suite operation. In particular, the vendor was responsible for the construction and operation of the sensor suite which houses the Shack-Hartmann and Phase Diversity wavefront sensors. The vendor's unique capabilities for this procurement are further supported by the nature of previous development efforts. Furthermore, this vendor has previously developed system-level aspects of the SMT, and has provided control technologies and component-level improvements to the SMT at Government expense.

This procurement is to support the investigation of advanced control techniques for segmented mirror optical systems. These sub-systems have not yet reached the point of commercial use. Therefore, commercial suppliers would not be able to provide the necessary support. Knowledge of segmented mirror optical systems as specifically employed within the SMT is a required vendor capability within this procurement and this knowledge remains a restricted topic. Therefore, no other known vendor is available for this work and possesses the combination of all required critical features stated above.

Integration of the upgraded SMT hardware and provision of professional technical support will require assimilated knowledge and techniques from the proposed vendor for efficient execution and lower program risk. It is not possible for the government to create in advance exact technical specifications for the proposed tasks regarding this new technological development. As research efforts proceed and results are obtained, topic areas in support of DoD applications will be further explored and used to define the specific tasks requested of the vendor within the scope of the technical, engineering and metrology support tasks.

6. Description of Efforts Made to Solicit Offers from as Many Offerors as Practicable

Based on market research of GSA engineering vendors who are involved with ongoing, government-supported adaptive optics programs, Lockheed Martin is the most qualified vendor for this position. Their unique experience with the hardware and software necessary to operate the SMT provides them a comprehensive skill set which will allow NPS to conduct research readily. Their expertise within the adaptive optics community is well established and they can provide information that other vendors may not be able to provide.

7. Determination of Fair and Reasonable Cost

Costs will be determined fair and reasonable at time of award based on previous contract prices.

8. Market Research

Market research was conducted and it was determined that only Lockheed Martin could perform the quality of work required. Due to the specialized knowledge of SMT hardware, software and experience acquired during the original operation of the SMD program, only Lockheed Martin can perform the required SMT work in this technical area.

9. Other Facts Supporting Use of Other Than Full and Open Competition

Since Lockheed Martin is physically located 100 miles commuting distance from NPS, additional travel expense is minimized when on-site support is required.

10. Actions to Remove Barriers to Future Competition

Consulting expertise in specific areas of scientific research cannot be detailed in a document. The subject matter background, access to proprietary information, and work history of the vendor must be examined before recommendation as professional support to AOCOE. There are currently no plans to remove barriers for future competition.