RETRAINEE - JOB CREATION

Critical Proposal for:

Northrop Grumman Systems Corporation

Agreement Number: ET16-0228

Panel Meeting of: November 5, 2015

ETP Regional Office: North Hollywood **Analyst:** M. Reeves

PROJECT PROFILE

Contract Attributes:	Critical Proposal Retrainee Job Creation Initiative Veterans Priority Rate	Industry Sector(s):	Manufacturing Aerospace and Defense Priority Industry: ☒ Yes ☐ No
Counties Served:	Kern, Los Angeles, San Diego, Santa Barbara, Santa Clara, Sonoma, Ventura	Repeat Contractor:	☒ Yes ☐ No
Union(s):	☐ Yes ☒ No		

Number of Employees in:	CA: 23,850	U.S.: 61,547	Worldwide: 64,570
Turnover Rate:	6%		
Managers/Supervisors: (% of total trainees)	8%		

FUNDING DETAIL

Program Costs	-	(Substantial Contribution)	(High Earner Reduction)	=	**Total ETP Funding**
$899,940		$0	$0		$899,940

In-Kind Contribution:	100% of Total ETP Funding Required	$1,600,000

TRAINING PLAN TABLE

Job No.	Job Description	Type of Training	Estimated No. of Trainees	Range of Hours		Average Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	Retrainee Priority Rate	Business Skills, Computer Skills, Continuous Improvement, Hazardous Materials, Manufacturing Skills, Advanced Technology, PL-Manufacturing Skills	1,000	8-200 Weighted Avg: 32	0	$576	$15.07
2	Retrainee Job Creation Initiative	Business Skills, Computer Skills, Continuous Improvement, Hazardous Materials, Manufacturing Skills, Advanced Technology, PL-Manufacturing Skills	270	8-200 Weighted Avg: 54	0	$1,080	$15.07
3	Retrainee Job Creation Initiative Veterans	Business Skills, Computer Skills, Continuous Improvement, Hazardous Materials, Manufacturing Skills, Advanced Technology, PL-Manufacturing Skills	30	8-200 Weighted Avg: 49	0	$1,078	$15.07

Minimum Wage by County: Job Numbers 1-3: $16.44 per hour for Santa Clara County; $15.97 per hour for Los Angeles County; $15.93 per hour for San Diego County; and $15.07 per hour for Kern, Santa Barbara, Sonoma, and Ventura Counties.

Health Benefits: ☒ Yes ☐ No This is employer share of cost for healthcare premiums – medical, dental, vision.

Used to meet the Post-Retention Wage?: ☒ Yes ☐ No ☐ Maybe

Up to $1.54 per hour (Job Number 1) and $2.44 per hour (Job Numbers 2 & 3) may be used to meet the Post-Retention Wage.

Wage Range by Occupation		
Occupation Titles	Wage Range	Estimated # of Trainees
Job Number 1		
Operations Staff		75
Information Technology/Engineering Staff		275
Sr. Information Technology/Engineering Staff		75
Manufacturing/Production/Mechanics Staff		400
Quality Staff		75
Supervisor/Manager		100
Job Numbers 2 & 3 (Job Creation)		
Operations Staff		30
Information Technology/Engineering Staff		60
Manufacturing/Production/Mechanics Staff		200
Quality Staff		5
Supervisor/Manager		5

Critical Proposal

This proposal for Northrop Grumman Systems Corporation (NGSC) has been designated a Critical Proposal by the Governor's Office of Business and Economic Development based on NGSC's planned business expansion and commitment to adding new jobs in California. The Company has designated its Palmdale facility as a Manufacturing Center of Excellence, one of only two in the nation; and its San Diego facility as an Engineering Center of excellence, one of three in the nation.

INTRODUCTION

Founded in 1939, NGSC (www.northropgrumman.com) is a global security company that develops innovative products and solutions in unmanned systems, cyber, C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance), and logistics for government and commercial customers worldwide. NGSC operates in four different business sectors: Aerospace Systems, Information Systems, Technical Services, and Electronic Systems. This proposal represents NGSC's Aerospace Systems Sector only, which focuses on developing, integrating, producing, and supporting manned and unmanned aircraft, spacecraft, high-energy laser systems, microelectronics, and other systems and subsystems critical to maintaining the nation's security. These systems and technologies are used in a variety of mission areas including intelligence, protected communications, battle management, strike operations, electronic warfare, missile defense, and space science and exploration.

Retrainee - Job Creation

The Panel offers incentives to companies that commit to hiring new employees. Training for newly-hired employees will be reimbursed at a higher rate and trainees will be subject to a lower post-retention wage. However, NGSC is not asking for a reduced wage, as all trainees in this proposal will meet the standard ETP Minimum Wage (including health benefits).

NGSC's Aerospace Systems Sector plans to create over 700 new jobs in California. These jobs are expected to be added over the next five years and are anticipated to be created primarily at the Company's facilities in El Segundo, Mojave, Palmdale, San Diego and Redondo Beach. However, additional hiring may occur at other Aerospace Systems Sector locations throughout California.

In this proposal, NGSC has committed to hiring a total of 300 new employees over the next two years. This growth includes the hiring of 30 Veterans (Job Number 3). The date-of-hire for all trainees will be within the three-month period before contract approval or within the term-of-contract. These trainees will be hired into "net new jobs" as a condition of contract.

PROJECT DETAILS

There are several initiatives impacting the Company's planned growth, some of which must remain classified. However, the following key developments are driving the need to hire and train net new workers, as well as retrain incumbent staff:

1) NGSC recently secured several new contracts that will expand existing workload, and require higher production capacity:
    a) The U.S. Air Force is expanding its fleet of RQ-4 Global Hawk aircraft systems and has contracted with NGSC in this endeavor. This effort requires NGSC to increase its production capabilities. As well, the Company must move forward to incorporate advances in high-altitude unmanned aircraft technology with a 10-year planning horizon for modernization.
    b) NGSC is a principal member of the Lockheed Martin-led industry team that is developing and producing three variants of the F-35 Lighting II fighter. This program is ramping up to full rate production, which requires completing one center fuselage per day. Currently, NGSC produces one completed fuselage every five days; the "ramp up" will occur gradually over the next two years as workers are hired and trained.
2) Technology innovations are leading to new opportunities:
    a) 3-D printing technologies, as well as advancements in composites and coatings are taking the industry in new directions. Composites typically weigh 20% less than aluminum and have a longer life span than traditional metals. NGSC is creating Unmanned Aerial Vehicles with these cutting-edge technologies and materials.
    b) New advancements in unmanned technology are continually being developed and matured, at a rate never before experienced at NGSC, requiring continuous training of technicians and related occupations.
    c) Increased productivity and cost savings are fueling the move toward flexible robotic automation. NGSC is increasing its use of robotic technology, but is not reducing its reliance on workers. In fact, NGSC needs more workers to run the new technology and keep pace with growing demand for its products.

These initiatives require completely new production processes and procedures. NGSC plans to expand its footprint in Palmdale and Mojave to accommodate the new processes, and the global supply-chain needs brought about by the expansion outlined above. Training will take place at multiple NGSC Aerospace Systems Sector locations throughout California.

Although this Critical Proposal is requesting more funding than previously earned, the Company is confident that it will be able to execute its proposed training plan. Given its long-term

commitment to California and its designation of two facilities as Centers of Excellence, combined with the newly-secured federal defense contracts, NGSC expects to fully maximize performance under this proposal.

Training Plan

Business Skills (10%) – Training will be offered to all occupations. This training will focus on communication, negotiation, customer service, and documentation skills. Trainees will learn how to provide improved and consistent customer service throughout all business activities.

Computer Skills (15%) – Training will be offered to all occupations. NGSC uses a variety of complex systems to run its operations and to build and/or test its products. Employees will receive training on systems and computer applications applicable to their specific job roles and responsibilities. Automation and manufacturing software are vital tools for NGSC's operations, and employees must be proficient in these systems to perform at desired levels.

Continuous Improvement (15%) – Training will be offered to all occupations, with emphasis on Business Development, Change Management, Leadership/Coaching, Process Improvement and Six Sigma skills. A critical component of all products delivered by NGSC Aerospace Systems is "Zero Defect". The proposed training is designed to help the Company establish and maintain flawless production processes and quality assurance measures.

Hazardous Materials (10%) – Training will be offered to Manufacturing/Production/Mechanics Staff, Engineering Staff, and Quality Staff. This training will provide supplemental hazardous materials skills to frontline workers and lead personnel. Trainees will learn proper handling of hazardous types of materials and gases commonly associated with the Company's manufacturing processes.

Manufacturing Skills (40%) – Training will be offered to Manufacturing/Production/Mechanics Staff, Quality Staff, and Information Technology/Engineering Staff. This training is intended to ensure that workers have the requisite skills to manufacture products using engineering and design directives to produce aircraft that meet strict quality, safety, and zero defect standards.

Advanced Technology (10%) – Training will be offered to Information Technology/Engineering Staff. This training is designed exclusively for highly technical professionals in the engineering/aviation manufacturing industry. These technical courses include Architectural Modeling, Computer Aided Design, Computer Language, Programming/Software Development, and Software Configuration Management. This training is intended to foster a high level of innovation and product development expertise to drive the next generation of aerospace manufacturing specialists and engineers.

NGSC representatives indicate that the proposed Advanced Technology (AT) training is far more costly to deliver than more generalized computer-related subjects. Company representatives estimate that costs associated with this specialized training will likely range from $72 to $200 per hour, per trainee, depending on the subject matter. Due to the added costs of utilizing expensive system/design equipment and complex software, the Company is requesting increased reimbursement for the AT courses identified in the curriculum. The 1:10 trainer-to-trainee ratio will be maintained for AT training to allow for in-depth coverage of complex course material and personal attention from the instructor.

Productive Laboratory

Productive Lab (PL) trainees may produce goods for profit as part of the training in the courses identified under the Curriculum. The instructor will be dedicated to training delivery during all hours of training.

NGSC representatives state that there are certain production skills that are best learned through direct observation and hands-on experience. PL training will allow for practical, real-world instruction that cannot be adequately duplicated in a classroom setting. Therefore, the Company plans to utilize PL training for approximately 500 Manufacturing/Production/Mechanics Staff and Quality Staff employees. PL training will take place at various NGSC Aerospace Systems facilities in California.

Equipment to be used during the proposed PL training includes cranes, forklift, tow tractor, robotic control arm, Moen heater, light cart, air compressor, liquid coolant, hydraulic test stand, aircraft jack, cabin leakage tester, cooling air unit, and paint mixer. Training will be taught by subject matter experts with demonstrated knowledge and expertise in the aerospace manufacturing industry.

Due to the high cost of equipment, training time, and scheduling considerations, NGSC is requesting a trainer-to-trainee ratio of 1:3. The PL training will be capped at 60 hours per trainee.

Commitment to Training

- Training Infrastructure

In its prior ETP Agreement, NGSC had one person designated as a project administrator. For this proposal, the Company will have two administrators with direct responsibility for internal project management. In addition, the Company has several in-house trainers who will be responsible for scheduling, delivering, and documenting the training at all five California facilities. NGSC has also retained an outside administrative consultant to ensure that all training adheres to ETP requirements.

Recordkeeping

Staff has reviewed and approved the use of a Learning Management System for recordkeeping.

RECOMMENDATION

Staff recommends approval of this proposal.

PRIOR PROJECTS

The following table summarizes performance by NGSC under an ETP Agreement that was completed within the last five years:

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned $ %
ET12-0208	Palmdale, Manhattan Beach, San Diego	12/19/11 – 12/18/13	$529,505	$226,749 (43%)

Note: The Company's primary customer is the U.S. Government, and the agreement term for this particular ETP project coincided with the Budget Control Act of 2011, calling for Department of Defense (DOD) budget cuts. Additional mandated reductions took place during the U.S. Government sequestration process which required an additional $40 billion in defense budget cuts during the time period of the ETP Agreement. These budget cuts immediately caused delays in DOD contract awards, suspending deliverables from NGSC. The planned delivery of training was delayed or postponed, as a result.

DEVELOPMENT SERVICES

NGSC retained Training Funding Partners (TFP) in Fountain Valley to assist with development of this proposal for a flat fee of $32,500.

ADMINISTRATIVE SERVICES

TFP will also perform administrative services for a fee not to exceed 13% of payment earned.

TRAINING VENDORS

To Be Determined

Exhibit B: Menu Curriculum

Class/Lab Hours

8-200 Trainees may receive any of the following:

BUSINESS SKILLS

- Business/Technical Writing Skills
- Communication Skills
- Contract/Negotiation Skills
- Customer Service Skills
- Documentation Skills
- Finance/Accounting Skills
- Metrics/Measurement
- Planning and Scheduling
- Presentation Skills
- Sourcing and Procurement Skills
- Supply Chain Management
- Train-the-Trainer Skills

COMPUTER SKILLS

- Business Intelligence/Data Management Skills/Digital Data Overview
- Computer Programming/Software Development Skills
- Document Sharing Process System
- Earned Value Management System
- Enterprise Export Management System Skills
- Enterprise Resource Planning System
- Information Handling System
- Information Systems Security
- Intermediate/Advanced MS Office Skills (Word/Excel/PowerPoint)
- Learning Exchange System Skills
- Microsoft Project
- Microsoft Visio
- Opportunity Tracking Tool
- Parts System Skills
- PeopleSoft System Skills
- Product Data Management
- Publication Training (Acrobat Professional XI)
- QuickSilver Training
- Real Time Operating System
- SAP Skills
- Software/Hardware Skills
- System Architecture/Design Skills
- Visual Basic Skills

CONTINUOUS IMPROVEMENT

- Business Development Skills
- Change Management Skills
- Conflict Management Skills
- Resource Planning
- Global Perspectives

- ISO Standards
- Leadership/Coaching Skills
- Meeting Management Skills
- Process Improvement/Six Sigma Skills
- Project/Program Management Skills
- Quality Assurance/Quality Control
- Risk Management Skills
- Strategic Thinking Skills
- Team Building Skills
- Troubleshooting Skills

HAZARDOUS MATERIALS

- CTS (Central Transfer Station) Hazwaste Generator
- Transportation of Dangerous Goods
- Hazardous Materials/Hazard Communication Skills/Gases
- RCRA (Resource Conservation and Recovery Act) for Environmental Monitors and Supervisors

MANUFACTURING SKILLS

- Advanced Safety Skills
    - Asbestos Awareness
    - Certified Oxygen Cleanliness Instructor
    - Laser Safety and Hazard Awareness
    - Nuclear Safety Training
    - Weapon System Safety Training
    - IAL (Integrated Assembly Line Safety)
- Aerospace Manufacturing Equipment Training
- Aerospace Manufacturing Operations Skills
- Aircraft Maintenance, Modification and Testing
- Aircraft Structural Design/Development
- Assembly/Subassembly/Fabrication Skills
- Aviation Systems Support Skills
- Engineering Design/Engineering Skills
- Flight Operations
- Manufacturing Automation Systems
- Manufacturing Resource Planning
- Measurement Device Skills
- Metrology
- Missile Defense Agency/Missile Systems
- Paperless Manufacturing Systems
- Process Control Lab Skills
- Production Control
- Robotic Technology
- Sanding/Stripping
- System Test/Checkout

Safety Training is capped at 10% of a trainee's total training hours

ADVANCED TECHNOLOGY

- Abortext Software (Authoring for DITA using Arbortext Editor 5.4)
- Architectural Modeling Skills
- Computer-Aided Design Skills
- Computer-Aided Production Environment
- Computer-Assisted Three-Dimensional Interactive Application
- Computer Language Skills
- Computer Programming/Software Development Skills
- Dynamic Object Oriented Requirements System
- Electronic Data Technology
- Engineering Software Skills
- Enterprise Architecture Software/Systems
- Fibre Channel Storage Networking
- Red Hat Enterprise Linux (RHEL) Admin and User
- Service Oriented Architecture
- Software Configuration Management
- Software/Hardware Skills
- System Architecture/Design Skills
- Web Design/Content Management

Productive Lab Hours

0-60

PRODUCTIVE LAB – MANUFACTURING SKILLS (1:3 ratio)

- Aerospace Manufacturing Equipment Training
- Aircraft Maintenance, Modification and Testing
- Aircraft Structural Design/Development
- Assembly/Subassembly/Fabrication Skills
- Robotic Technology

Note: Reimbursement for retraining is capped at 200 total training hours per trainee, regardless of the method of delivery.