Critical Proposal
Retrainee – Job Creation
Training Proposal for:
The Boeing Company
Agreement Number: ET17-0404

Panel Meeting of: February 23, 2017
ETP Regional Office: North Hollywood
Analyst: M. Paccerelli

PROJECT PROFILE

<table>
<thead>
<tr>
<th>Contract Attributes:</th>
<th>Critical Proposal Retrainee</th>
<th>Industry Sector(s): Manufacturing Aerospace and Defense</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Job Creation Initiative Priority Rate</td>
<td>Priority Industry: ☒ Yes ☐ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Counties Served:</th>
<th>Los Angeles, Orange</th>
<th>Repeat Contractor: ☒ Yes ☐ No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Union(s):</th>
<th>☐ Yes ☒ No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of Employees in:</th>
<th>CA: 14,864</th>
<th>U.S.: 135,793</th>
<th>Worldwide: 156,921</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover Rate:</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Managers/Supervisors: (% of total trainees) | 0% |

FUNDING DETAIL

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>(Substantial Contribution)</th>
<th>(High Earner Reduction)</th>
<th>Total ETP Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>$386,300</td>
<td>$53,125 (15% Job 1)</td>
<td>$0</td>
<td>$333,175</td>
</tr>
</tbody>
</table>

In-Kind Contribution: 100% of Total ETP Funding Required $901,600
TRAINING PLAN TABLE

<table>
<thead>
<tr>
<th>Job No.</th>
<th>Job Description</th>
<th>Type of Training</th>
<th>Estimated No. of Trainees</th>
<th>Range of Hours</th>
<th>Average Cost per Trainee</th>
<th>Post-Retention Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Retraine Job Creation Initiative</td>
<td>Adv. Technology, Computer Skills, Commercial Skills</td>
<td>425</td>
<td>8-200 0-40</td>
<td>$703</td>
<td>$24.00</td>
</tr>
<tr>
<td></td>
<td>Priority Rate</td>
<td></td>
<td></td>
<td>Weighted Avg: 46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Retraine Job Creation Initiative</td>
<td>Adv. Technology, Computer Skills, Commercial Skills</td>
<td>43</td>
<td>8-200 0-40</td>
<td>$800</td>
<td>$24.00</td>
</tr>
<tr>
<td></td>
<td>Priority Rate</td>
<td></td>
<td></td>
<td>Weighted Avg: 40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Minimum Wage by County:** Job Number 1: $16.96 per hour for Los Angeles County and $17.22 per hour for Orange County. Job Number 2 (Job Creation): $14.13 per hour for Los Angeles County and $14.35 per hour for Orange County.

**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

Although employer provides health benefits, they are not being used to meet Post-Retention Wage.

**Wage Range by Occupation**

<table>
<thead>
<tr>
<th>Occupation Titles</th>
<th>Wage Range</th>
<th>Estimated # of Trainees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineer</td>
<td></td>
<td>468</td>
</tr>
</tbody>
</table>

Critical Proposal

This project has been designated a Critical Proposal by the Governor’s Office of Business and Economic Development based on Boeing’s plan to expand its business capacity in California by adding several hundred new high-skilled, high-wage engineering jobs in 2017.

INTRODUCTION

The Boeing Company (Boeing) (www.boeing.com) is a manufacturer of commercial jetliners and military aircraft. Boeing also designs and manufactures defense systems, satellites, and launch vehicles. The Company’s customers include most domestic and international airline carriers, NASA, and all branches of the military.

The proposed training will be provided to employees of Boeing's Southern California Design Center (SCDC) in Long Beach and Seal Beach. The SCDC consists of the Commercial Aviation Services (CAS), which includes the following businesses: Customer Support Engineering, Modifications and Freighter Conversions, and Fleet Services. Additionally, the SCDC encompasses the business of Production Airplane Programs and Core Engineering activities.
PROJECT DETAILS

The SCDC recently received a comprehensive work statement to provide full customer engineering support for the in-production 787 airplane. To support this effort, the SCDC need to add more Engineers, new hires and incumbents. Some incumbent Engineers are at risk of layoff due to changes in the economic climate in aerospace, primarily defense. This new work statement requires different tools and processes to support the 787. Workers require extensive training.

Currently, the SCDC provides support for the DC-8, DC-9, DC-10, MD-11, MD-80/-90, 707, 717, 727, 757 models and plans to support the Next-Generation 737, 747, 767 and 777 models as well as commercial product support for the KC-46 Tanker and P-8. Advanced training in airplane technologies, tools, and processes is required to support these work statements.

The goal of this training proposal is the development of teams able to support current and new work statements, specifically those based on support or design of Boeing's 7-series products. The expected outcome of training is a team of employees with engineering skills to work independently or semi-independently (under supervision). Additionally, Engineers are expected to have working knowledge of the configuration management process and tools to apply them correctly.

Boeing anticipates strong growth in commercial aviation over the next several years and increasing internal capability and capacity to meet the expected demand for commercial airplanes and related service. The expansion will allow Boeing to streamline processes and develop common practices by establishing a single location for airplane support.

This will be Boeing's ninth ETP Agreement and second within the last five years. Training will be provided to newly-hired staff who have not participated in the prior ETP projects. Some trainees who participated in previously provided ETP-funded training will continue training in other course offerings. Training will focus on 787 customer engineering which was not provided in prior projects.

Retrainee - Job Creation

In 2016, the Company completed the refurbishment of its facilities in Seal Beach to accommodate a new, state-of-the-art Boeing Operations Center (BOC). The BOC is designed to address customer needs (24-hours a day, 7 days a week, 365 days per year), and provide services for both McDonnell Douglas heritage airplanes and the newly added Boeing 7-series.

To staff this new facility, Boeing has committed to hiring 43 new employees (Job Number 2). New Engineers will undergo extensive training alongside incumbent Engineers to develop the requisite skills to facilitate the Company’s expansion.

Training for newly hired employees will be reimbursed at a higher rate, and trainees must be hired within the three-month period prior to Panel approval or during the term of contract. Trainees' date-of-hire will be within the three-month period before contract approval or within the term-of-contract. Trainees will be hired into “net new jobs” as a condition of contract.

Training Plan

Advanced Technology (60%): AT will be provided to Engineers. Although the trainees possess degrees in accredited course study in engineering, computer science, mathematics, physics or chemistry; many of the new advanced analysis and design skills needed to work specifically on the Boeing 7-series models are not taught in universities and are not currently among the trainees' skills set.
AT will be reimbursed at a higher rate given it is delivered in highly technical learning environments, includes special curricula, expensive training materials, high-end equipment, and certified training personnel. The trainer-to-trainee ratio is 1:10 to allow for in-depth coverage and personal attention from the instructor.

**Computer Skills** (30%): While the content of this curriculum is the same as AT courses, it will be classified as Computer Skills for the purpose of lower reimbursement rate because training will exceed the required AT trainer-to-trainee ratio of 1:10.

**Commercial Skills** (10%): Training will be offered primarily to newly-hired Engineers, which includes Airplane Certification, Airplane Flight Test, Airplane Structures and Systems, Aviation Safety and Airplane Certification. Training will be provided via classroom and Computer-Based Training (CBT). CBT will supplement the trainees’ class/lab training and is capped at 50% of the total training hours per trainee.

**Substantial Contribution**

Boeing is a repeat contractor with anticipated earnings in excess of $250,000 at the Long Beach and Seal Beach facilities within the past five years (see Active Project Table below). Accordingly, reimbursement for trainees at these facilities in Job Number 1 will be reduced by 15% for this project, to reflect the company’s $53,125 Substantial Contribution (SC) to the cost of training. The Substantial Contribution requirement is waived in Job Number 2 for Retrainees – Job Creation trainees as SC is not applicable to Job Creation.

**Commitment to Training**

Boeing’s current training budget is approximately $17.5M. The Company provides many training opportunities through its Learning, Training and Development (LTD) services. Ongoing training consists of new employee orientation, technical skills development, and soft skills enhancement through team building and leadership training.

ETP funds will not displace the existing financial commitment to training. Safety training is, and will continue to be, provided in accordance with all pertinent requirements under state and federal law.

- **Training Infrastructure**

  Training will be delivered by in-house subject matter experts. For project administration, Boeing has identified specific members of its Engineering Operations Staff to ensure that training and documentation adheres to ETP requirements. As a repeat ETP contractor, the Company has well-established internal administrative procedures using Boeing LTD, an established service that provides standardization, enrollment, training, and tracking services.

**Electronic Recordkeeping**

Boeing will use its Learning Management System to document training. Staff has reviewed and approved the system.

**RECOMMENDATION**

Staff recommends approval of this proposal.
ACTIVE PROJECTS

The following table summarizes performance by Boeing under an active ETP Agreement:

<table>
<thead>
<tr>
<th>Agreement No.</th>
<th>Approved Amount</th>
<th>Term</th>
<th>No. Trainees (Estimated)</th>
<th>No. Completed Training</th>
<th>No. Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET15-0381</td>
<td>$747,484</td>
<td>1/26/15 – 1/25/17</td>
<td>347</td>
<td>781</td>
<td>683</td>
</tr>
</tbody>
</table>

Boeing's projected performance is 90% based on the total reimbursable hours of 37,756 entered into the ETP Online System. This will result in projected earnings of approximately $672,908. The remaining trainees are expected to complete the retention period by January 2017, at which time, Boeing will submit the Final Closeout Invoice.

DEVELOPMENT SERVICES

N/A

ADMINISTRATIVE SERVICES

N/A

TRAINING VENDORS

N/A
Exhibit B: Menu Curriculum

Class/Lab Hours
8 – 200
Trainees may receive any of the following:

ADVANCED TECHNOLOGY
- B01 Electrical Engineering
- B02 Propulsion
- B03 Mechanical and Structures Engineering
- B04 Airplanes and Systems Engineering
- B05 Tools and Processes
- B06 Regulatory Compliance Training
- B07 Payloads

COMPUTER SKILLS
- B11 Electrical Engineering
- B12 Propulsion
- B13 Mechanical and Structures Engineering
- B14 Airplanes and Systems Engineering
- B15 Tools and Processes
- B16 Regulatory Compliance Training
- B17 Payloads

CBT Hours
0 - 40

COMMERCIAL SKILLS
- Aviation Safety 101 [.3 hours]
- Airplane Certification: Compliance with Airworthiness Regulations [.2 hours]
- TR012896 Aircraft Familiarization Overview [8 hours]
- Airline Support Manager Training [2 hours]
- Airplanes 101 - Module 1: Principles of Flight [1 hour]
- Airplanes 101 - Module 2: Airplane Requirements [1 hour]
- Airplanes 101 - Module 3: Designing an Airplane [1 hour]
- Airplanes 101 - Module 4: Airplane Structures [1 hour]
- Airplanes 101 - Module 5: Airplanes Systems [1 hour]
- Airplanes 101 - Module 6: Aviation Safety [1 hour]
- Airplanes 101 - Module 7: Airplane Flight Test [1 hour]
- Airplanes 101 - Module 8: Production and Delivery System [1 hour]
- European Aviation Safety Agency (EASA) CS25 Delegation Training [1.5 hours]
- EASA Post Type Validation Guidelines [2 hours]
- Major/Minor Training for New DAEs (Class 2 Struct) [0.5 hours]
- Regulatory Administration Guidance and BPM Knowledge [1 hour]
- Authorized Representative Authority [1 hour]
- Major Minor Process [3 hours]
- Test Witnessing [0.5 hours]
- Conformity [0.5 hours]
- Notification of Authorized Representative Travel to Other Countries to perform Organization Designation Authorization (ODA) functions [0.5 hours]
- Compliance Summary Report Guidelines [1 hour]
- Undue Pressure & ODA Unit Member Independence [0.5 hours]
- CP101 – Process Overview: Certification Plans [0.5 hours]
- CP204 – Certification Plan Process Roles: Authorized Rep [0.5 hours]
CP310 – Certification Plan: Method of Compliance Discussion [1 hour]
CP314 – Certification Plan: Technical Specialist Review [0.5 hours]
Request for Conformity (RFC) System Training Web Single Sign On Login [0.5 hrs]
RFC System Training for Drafter & Submitter Roles [1 hour]
Airplane Certification: Introduction to Airplane Certification [0.2 hours]
Airplane Certification: Roles and Responsibilities [0.2 hours]
Airplane Certification: Project Management and Planning [0.2 hours]
Airplane Certification: Certification Requirements [0.2 hours]
Airplane Certification: Major/Minor Determination Process [0.2 hours]
Airplane Certification: Certification Plans [0.2 hours]
Airplane Certification: Compliance with Airworthiness Regulations [0.2 hours]
Airplane Certification: Regulatory Issues Management [0.2 hours]
Airplane Certification: Foreign Validation [0.2 hours]
Airplane Certification: European Aviation Safety Agency [1 hour]
Detailed FAR Part 25 for Structures [1 hour]
Regulatory Knowledge - 14 CFR Part 21, 25, & 183 [1 hour]
TR009659 Electrical Design Means of Compliance [2 hours]
TR009654 Electrical Design Major/Minor Criteria Training [2 hours]

Note: Reimbursement for retraining is capped at 200 total hours per trainee, regardless of method of delivery. CBT is capped at 50% of total training hours, per trainee.