



RETRAINEE - JOB CREATION

Training Proposal for:

Linear Technology Corporation

Agreement Number: ET17-0237

Panel Meeting of: September 23, 2016

ETP Regional Office: San Francisco Bay Area

Analyst: L. Lai

PROJECT PROFILE

Contract Attributes:	Retrainee Priority Rate Job Creation Initiative	Industry Sector(s):	Manufacturing Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Santa Clara	Repeat Contractor:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Union(s):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Number of Employees in:	CA: 1,347	U.S.: 2,076	Worldwide: 4,851
Turnover Rate:	10%		
Managers/Supervisors: (% of total trainees)	12%		

FUNDING DETAIL

Program Costs	-	(Substantial Contribution)	(High Earner Reduction)	=	Total ETP Funding
\$372,280		\$0	\$0		\$372,280

In-Kind Contribution:	100% of Total ETP Funding Required	\$551,329
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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, Cont. Improv., Mfg. Skills, PL-Mfg. Skills	278	8 - 200	0 - 4	\$1,260	\$17.02
				Weighted Avg: 70			
2	Retrainee Priority Rate Job Creation	Business Skills, Cont. Improv., Mfg. Skills, PL-Mfg. Skills	10	8 - 200	0 - 4	\$2,200	\$15.00
				Weighted Avg: 110			

Minimum Wage by County: Santa Clara County: Job #1 (Retrainee) - \$17.02 ; Job #2 (Job creation) - \$14.19

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 \$2.02 per hour may be used to meet the Post-Retention Wage for Job #1.

Wage Range by Occupation		
Occupational Titles	Wage Range	Estimated # of Trainees
JOB NUMBER 1 – RETRAINEES		
Engineer		26
Technician		59
Security Coordinator		8
Wafer Fab Specialist		152
Supervisor		15
Manager		18
JOB NUMBER 2 – JOB CREATION		
Wafer Fab Specialist		8
Technician		2

INTRODUCTION

Founded in 1981 and located in Milpitas, Linear Technology Corporation (Linear) designs, manufactures and markets a broad range of high performance analog integrated circuits for companies worldwide. Linear’s products provide an essential bridge between the analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear produces power management, data conversion, signal conditioning, RF and interface ICs, and wireless sensor network products.

PROJECT DETAILS

The proposed training will enable Linear to remain competitive in a challenging semiconductor manufacturing industry in which companies are moving overseas to lower costs. The proposed training will improve the Company's workforce skills, improve equipment uptime and line yield, and allow Linear to keep its manufacturing in California.

The goal of training is to transform the manufacturing plant into a world-class facility for key manufacturing metrics and to expand capacity. The Company will invest six million dollars in several new pieces of equipment in the next two years. The addition of the newer advanced tools and advanced processes will require training which is not included in the equipment purchase price. Without training, employees would not have sufficient knowledge and skills to operate new equipment, resulting in lower production output.

Retrainee - Job Creation

In support of 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.

Linear has committed to hiring 10 new Wafer Fab Specialists and Technicians (Job Number 2). Although subject to a lower post-retention wage of \$14.19, Job Creation trainees will be placed at \$15.00. With new equipment, the Company's manufacturing capacity is expected to increase. The date-of-hire for all trainees 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. Existing space will be repurposed to facilitate the new hires.

Training Plan

Training will be conducted via class/lab, CBT, and Productive Lab at the Milpitas facility. Training will be delivered by internal subject-matter experts and, when necessary, external vendors.

Business Skills (5%): This training will be offered to Managers and Supervisors to improve time management, project management, and team building skills. Training will increase productivity.

Continuous Improvement (5%): This training will be offered to all occupations in topics such as KANBAN, problem solving troubleshooting tools and techniques, and Poka Yoke, mistake proofing techniques. Training will help eliminate product defects.

Manufacturing Skills (50%): This training will be offered to Wafer Fab Specialist, Technicians, and Engineers. The primary training effort for improving productivity is improving the flexibility and capability of the production and maintenance Staff. Training will concentrate on cross training manufacturing Staff to improve the expertise level required to operate and maintain the tools used in wafer fabrication. Trainees will learn the best known methods to repair and maintain the manufacturing tools. Productive maintenance concepts will be taught to improve equipment availability.

PL-Manufacturing Skills (40%)

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

Part of the strategy to improve competitiveness of the manufacturing operations is to create an agile and flexible workforce that can operate over 100 equipment/tools using different techniques and processes. Linear proposes PL-Manufacturing Skills training to approximately 199 Wafer Fab Specialist and Technician trainees because the equipment/tools cannot be replicated in a classroom setting. During training, production will be significantly slowed with higher defects. Trainer-to-trainee ratio for PL will be 1:1. Training will be taught by subject matter experts, who will attest to the trainee's competency once training is completed. PL training will be capped at 60 hours per trainee.

Certified Safety Training

Hazardous Waste Operations and Emergency Response Standard (HAZWOPER). This training is specifically designed for workers who handle hazardous substances as first-responders, or clean-up as needed at a hazard disposal or emergency site. Trainees will receive 8 hours of classroom training. Completion of the training results in a certificate that expands employment opportunities. Each certification requires an 8-hour annual refresher course. This coursework must be approved by Cal-OSHA, and the instructors must be certified by Cal-OSHA.

Commitment to Training

ETP funds will not displace the existing financial commitment to training. The Company's annual training budget per facility is approximately \$25,000 for new-hire orientation, basic computer, safety, sexual harassment prevention, and material handling. Safety training is, and will continue to be, provided in accordance with all pertinent requirements under state and federal law.

➤ Training Infrastructure

Linear has a dedicated learning and development team of 3 professionals that will schedule and oversee training. The production and maintenance departments will provide further oversight and coordination on the contract.

RECOMMENDATION

Staff recommends approval of this proposal.

DEVELOPMENT SERVICES

Linear retained Deloitte Tax LLP in San Francisco to assist with development of this proposal for a flat fee of \$5,000.

ADMINISTRATIVE SERVICES

N/A

TRAINING VENDORS

To Be Determined

Exhibit B: Menu Curriculum**Class/Lab Hours**

8 - 200

Trainees may receive any of the following:

BUSINESS SKILLS

- Conflict Resolution
- Leadership
- Time Management

CONTINUOUS IMPROVEMENT

- Cycle Time
- Emergency Response Training (HAZWOPER)
- KANBAN
- Lean Manufacturing.
- Poka Yoke (Fool Proofing Operations)
- Problem Solving Troubleshooting (8D, 5-WHY, Fishbone, PDCA)
- Project Management
- Team Building
- Training within Industry (TWI) Train-the-trainers

MANUFACTURING SKILLS

- ASML Stepper Preventative Maintenance
- Diffusion Furnace Pull and Clean
- Endura Metal Deposition PM Kit Change
- Lean Manufacturing
- Match rebuilding
- Novellus heater block replacement and PM
- Operation and maintenance of the new tools
- Plasma Concepts
- Plasma Etcher PM Kit Change
- Poka Yoke (fool proofing operations)
- Pump Rebuild Best Known Method
- Robot Maintenance and Rebuild
- Preventative Maintenance
- Tool Maintenance
- Tool Operator Certification
- TPM (Total Productive Maintenance)
- Vacuum Technology
- Varian Implanter Source Rebuilds

Productive Lab Hours

8 – 60

MANUFACTURING SKILLS (1:1 Ratio)

- ASML Stepper Preventative Maintenance
- Diffusion Furnace Pull and Clean
- Endura Metal Deposition PM Kit Change
- Lean Manufacturing
- Match rebuilding
- Novellus heater block replacement and PM
- Operation and maintenance of the new tools
- Plasma Concepts
- Plasma Etcher PM Kit Change
- Poka Yoke (fool proofing operations)
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- Tool Maintenance
- Tool Operator Certification
- TPM (Total Productive Maintenance)
- Vacuum Technology
- Varian Implanter Source Rebuilds

CBT Hours

0 – 4

MANUFACTURING SKILLS

- Equipment Troubleshooting and Prevention (30 min)
- Machine Operation (30 min)
- Manufacturing Process Documentation (30 min)
- Power Tool Operation Procedures (30 min)
- Preventative Maintenance (30 min)
- Tool Cleaning and Inspection (20 min)
- Wafer Fab Cleanroom Protocol (20 min)
- Wafer Handling Protocol (30 min)

Note: Reimbursement for retraining is capped at 200 total training hours per trainee, regardless of the method of delivery. CBT is capped at 50% of total training hours, per trainee. PL is capped at 60 hours per-trainee.