Training Proposal for:

Ventura County Electrical Joint Apprenticeship and Training Trust Fund

Agreement Number: ET16-0911

Panel Meeting of: September 25, 2015

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

PROJECT PROFILE

Contract Attributes:	Retrainee Apprenticeship Priority Rate	Industry Sector(s):	Construction Priority Industry: ☒ Yes ☐ No
Counties Served:	Ventura	Repeat Contractor:	☒ Yes ☐ No
Union(s):	☒ Yes ☐ No International Brotherhood of Electrical Workers, Local 952		
Turnover Rate:	≤20%		
Managers/Supervisors: (% of total trainees)	N/A		

FUNDING DETAIL:

Program Costs	+	Support Costs	=	Total ETP Funding
$208,400		$14,400 8%		$222,800

In-Kind Contribution:	50% of Total ETP Funding Required	Inherent

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 Journeyman Priority Rate	Business Skills, Commercial Skills, Computer Skills, OSHA 10/30	50	8-200	0	$564	$41.11
				Weighted Avg: 24			
2	Retrainee Apprentice	Commercial Skills, OSHA 10	70	8-210	0	$2,780	$20.55
				Weighted Avg: 200			

Minimum Wage by County: $20.55 per hour SET Statewide Priority Industry.

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

Wage Range by Occupation		
Occupation Titles	Wage Range	Estimated # of Trainees
Journeyman Electrician/Inside Wireman		50
Apprentice Electrician/Inside Wireman		70

INTRODUCTION

Founded in 1977, the Ventura County Electrical Joint Apprenticeship and Training Trust Fund (Ventura Electrical JATF) (www.vcjatc.org) is a joint effort of the International Brotherhood of Electrical Workers Local 952 and the National Electrical Contractors Association. The JATF is comprised of labor and management representatives and is governed by a Board of Trustees. With approximately 100 participating employers, the union represents over 400 electricians in Ventura County.

The five-year Apprenticeship program offers workers the opportunity to receive classroom and hands-on experience in installation, wiring methods and utilization systems. Apprentices attend classroom training twice a week (1,080 hours) and complete a total of 8,000 hours with electrical contractors throughout Ventura County. This work is performed I residential, commercial and industrial buildings.

Inside Wiremen are trained at the Ventura training facility to install and maintain electrical systems. These electrical systems are found in commercial and industrial facilities, electric vehicle stations and transit systems. In an effort to promote new advances in green technology, the JATF offers training opportunities to its members in solar panel installation. These courses focus on renewable energy and efficient electrical control systems.

Employer Demand for Training

Signatory employers and union representatives have identified the following reasons for Journeyman skills training, add new courses in Apprentice Related & Supplemental Instruction (RSI): new energy efficiency regulations, the need to reduce costs to remain competitive, higher quality standards, and the increasing complexity of construction projects. Specific construction projects that are generating demand for skilled Apprentices and Journeyman Electricians in the Ventura County region are shown below:

- Ventura County Medical Center
- Solar PV Installation at the Ventura County Government Center
- Elm Street Elementary School
- Parking Structure at Community Memorial Hospital
- La Entrada Housing Project
- Movie studios in Moorpark
- Multiple small school jobs
- Ongoing projects at the Proctor and Gamble paper plant in Oxnard
- Ongoing projects at Amgen Corporation in Newbury Park
- Ongoing projects at Baxter Pharmaceuticals in Thousand Oaks

Apprenticeship Program

The Panel is authorized to fund Apprentice training that does not displace any other source of government funds, or replace an existing apprenticeship program approved by the Division of Apprenticeship Standards (DAS). The Panel adopted the Apprenticeship Training Program as a pilot in March 2012. It is designed to supplement cost of delivery for the RSI portion of DAS-approved apprenticeship training.

Apprenticeships are a multi-year training program that results in DAS certification to work as a Journeyman. They are authorized in California under the Shelly-Maloney Apprenticeship Labor Standards Act of 1939. Apprentices commit to training under contract with an apprenticeship program sponsor. They advance through a series of apprenticeship levels as they complete modules of RSI and on-the-job training. Wages are paid for hours worked on the job, in progression with a series of advancements up to the Journeyman level.

Apprentice programs are typically sponsored by a Joint Apprenticeship Training Committee (JATC) created through collective bargaining, with an equal number of members appointed by union and employers.

Depending on the type of trade, apprenticeship programs vary in length, typically from 2-6 years for ETP funding. However, the first-year Apprentices are not eligible due to the higher drop-out rates associated with this entry-level. As noted earlier, this program runs five years.

Here, training is administrated by the trust fund that supports the JATC, and is also jointly managed between union and employers. The employers are not “participants” but are signatories to the Collective Bargaining Agreement.

RSI is traditionally delivered as class/lab, and ETP does not reimburse CBT delivery for apprenticeship training. The curriculum is developed with input from DAS and a designated Local Educational Agency (in this proposal Ventura county Superintendent of Schools). The Apprenticeship Program allows reimbursement for up to 200 hours of RSI plus OSHA10, per-apprentice.

For the building trades, it is not customary for workers to be employed for a standard retention period of 90 consecutive days with one employer. In that instance, the Panel may substitute non-consecutive hours worked for retention. This modified retention period must be no less than 500 hours within 272 days with more than one employer. Both the standard and modified retention periods will apply to this proposal.

Because ETP funding cannot displace another source of government funds, the fixed fee rate is reduced by $5.00 to account for adult education funding appropriated each year for Apprentice training through the California Community College Chancellor's Office and Department of Education. This changes the ETP Priority Industry Rate from $18.00 to $13.00 per hour for all Apprentice Job Numbers.

In addition, the Panel adopted a "blended rate" for Journeymen, reflecting the fact that they may be employed by a variety of contractors over the two-year term of contract ranging from large employers, to small (≤100 employees). This is $22 per hour, midway between the Priority Industry standard rate ($18) and Small Business rate ($26).

Under the Apprenticeship Training Program, the post-retention wage has been standardized to $20.55 per hour reflecting the Special Employment Training (SET) wage for Priority Industry. This wage was chosen for ease of administration. However, the actual wage rate will be used if higher, as is true for Journeyman in this proposal.

DAS Completion Rates

The completion rate for this DAS-approved program for 2009-2013 is 79.47% and exceeds the industry completion percentage of 66.31%. This meets Panel standards.

PROJECT DETAILS

To meet current and future demand for electrical industry workers, Ventura Electrical JATC will provide training for both large and small employers. The proposed training, entirely center-based, is scheduled to commence approximately a week following Panel approval.

Training Plan

The following classes will be offered to **Journeymen**:

Commercial Skills (80%) - Green training will be the focus due to the demand for energy efficient construction methods and technologies. Training will cover energy-efficient technologies and products such as green building materials, solar photovoltaic panels, new motor controls, advanced welding, green materials testing and audit equipment.

Business Skills (5%) - Electricians must understand new national building codes and green practices; follow certification guidelines; use more collaborative bidding and project development practices; meet budgets; interact with various types of construction workers; and implement green solutions in traditional work environments. Training will give workers the tools to plan, organize, and manage their construction projects more efficiently. Training will also include teambuilding and leadership skills so that electricians can lead teams in an effective and efficient manner.

Computer Skills (5%) - Training will include scheduling, planning and modeling software. AutoCAD and Job Tracking applications will provide trainees with the tools to modify blueprints,

look up project requirements, build budgets and timelines, design virtual buildings, and adjust computerized control systems.

OSHA 10/30 (10%) - OSHA 10/30 training is a series of courses "bundled" by industry sector and occupation. It consists of 10 hours of training for journey-level and 30 hours for frontline supervisors. The coursework is geared to construction work, and also manufacturing. Completion of the training results in a certificate that expands employment opportunities. The coursework must be approved by Cal-OSHA, and the instructors must be certified by Cal-OSHA.

This training provides a complete overview of occupational safety and health so that workers are more knowledgeable about workplace hazards and understand their rights as workers. Equipment and materials not used correctly can also lead to injuries for the worker and puts other people in the area in potential danger.

The following classes will be offered to **Apprentices**:

Commercial Skills (90%) - Apprentices will learn to install, maintain, and repair various types of electrical and electronic equipment in commercial, industrial and residential establishments. They will also learn to install, connect and test electrical wiring systems for lighting, heating, air conditioning and communications for any building or structure. This training will provide the skills to perform the following:

- Installing New Wiring and Repairing Old Wiring
- Installing Receptacles, Lighting Systems and Fixtures
- Troubleshooting and Repairing Electrical Systems
- Establishing Grounding Systems
- Installing Service to Buildings and Other Structures
- Providing Power and Controls to Motors, HVAC, and Other Equipment
- Installing Fire Alarm and Security Systems
- Installing, Maintaining and Repairing Lightning Protection Systems

OSHA 10 (10%) - Electricians work under extremely dangerous conditions which require considerable physical effort on the part of the Apprentice such as lifting, climbing, crouching, and working in cramped areas. With the potential for serious injury or death of workers and/or others in the vicinity of the work area, participating employers and property owners need electricians to undergo additional training to ensure that their skills are up to date and that work is performed with optimal efficiently and safety.

Curriculum Development

The Curriculum was developed and customized with input from both labor and management representatives to address the local needs of union members, participating employers and the industry as a whole. IBEW Local 952 was directly involved in the development of the Curriculum and training plan, and is in full support of the proposed training for its members.

The Apprentice program uses the National Joint Apprenticeship and Training Committee's Curriculum which was developed for the exclusive use of IBEW-NECA JATCs.

Marketing and Support Costs

Ventura Electrical JATF conducts marketing through direct mailings, informational flyers, personal contacts, telephone calls, public service announcements, emails and its website. Class information will be disseminated throughout the year to all apprentice and journeyman electricians within the jurisdiction, as well as to the electrical contractors who employ them.

Staff from the JATF office will assist with marketing, recruitment, needs assessments and scheduling. Ventura Electrical JATF is requesting 8% support costs to fund its staff in recruiting and qualifying additional participating employers for this program. Many participating employers have already been recruited; however, additional recruitment and assessment activities are anticipated. Staff recommends the 8% support costs.

Commitment to Training

Employers will continue to make contributions to the training trust for every hour worked by Apprentices and Journeymen. Safety training is provided by the participating employers in accordance with all pertinent requirements under state and federal law.

- Trainer Qualifications

Ventura Electrical JATF has one full-time trainer and 15 part-time trainers. All trainers are former or current members of the trade and some have received Master Certification status by the National Joint Apprenticeship and Training Committee.

RECOMMENDATION

Staff recommends approval of this proposal.

ACTIVE PROJECTS

The following table summarizes performance by Ventura Electrical JATF under an active ETP Agreement:

Agreement No.	Approved Amount	Term	No. Trainees (Estimated)	No. Completed Training	No. Retained
ET14-0908	$315,340	01/02/14 – 01/01/16	233	52	52

Based on ETP Systems to date, 14,663 reimbursable hours have been entered sufficient to earnings of $219,608 (70% of the approved Agreement amount). To date, 58 Journeymen and 72 Apprentices have completed the minimum required hours. Thus far, 52 Apprentices have completed training and retention. The proposed Agreement has been right-sized in alignment with projected earnings.

DEVELOPMENT SERVICES

California Labor Federation in Sacramento and Strategy Workplace Communications in Oakland assisted with development of this proposal at no cost.

ADMINISTRATIVE SERVICES

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

TRAINING VENDORS

N/A

Exhibit B: Menu Curriculum

Class/Lab Hours
8 – 200 (Job Number 1)

Trainees may receive any of the following:

JOURNEYMAN

COMMERCIAL SKILLS

- Codeology
  - National Electrical Code
  - Other Recognized Standards (Installation Changes)
  - Plan, Build, and Use
  - Related Standards (Mandatory and Permissive Rules)
  - Special Occupancies and Equipment
  - Arc Flash

- Analog/Digital Circuit (AC/DC) Principles
  - Math for Electricians
  - Ohm's Law
  - Generators
  - Inductance/Reactance
  - Series/Parallel Circuits

- Grounding
  - Grounding and Bounding
  - National Electrical Code Article 100-Definitions and Provisions
  - National Electrical Code Article 110-Requirements
  - National Electrical Code Article 90-Introduction
  - National Electrical Code Article Chapters 1-4
  - Significant Changes to National Electric Code

- Fire Alarm Systems and Installations
  - Definitions and Systems
  - Initiating Devices and Notification Systems
  - National Electrical Code and Installation Requirements
  - Start Up and Check Out Procedures
  - National Fire Protection Act, 1972

- Fire Life Safety
  - National Electrical Code (Relating to Fire Alarms)
  - National Electrical Code Article 725
  - National Electrical Code Article 760
  - NFPA 72
  - Principles of Electronics

- Industrial Motor Control
  - Control Relays and Timers

- Jogging and Plugging Controls
- Manual Starters and Magnetic Coils
- Push Buttons, Selector Switches and Mechanical Devices
- Solid State Electronic Devices
- Variable Frequency Drives

❖ Programmable Logic Control
- Developing Ladder Programming
- Introduction to Programmable Equipment
- Programming Programmable Logic Controllers
- Using Timers and Counters in Logic Programs
- Writing a Program

❖ Electrical Design
- 3 and 4-Way Switching
- Design of Electrical Circuits
- Magnetic Motor Control and the Code
- LonWorks and Building Automation
- Transformers and the Code

❖ Voice, Data and Video
- Audio Distribution
- CCTV Security Surveillance
- Computer Networking
- Fiber Optics
- Telephonic Interconnect

❖ Industry Specific Skills
- Solar Panel Installation
- Solar Photovoltaics
- Building Automation Systems
- Confined Space Entry
- Specialized Tools
- Conduit Bending
- Rigging and Lifting
- Firestop Installation
- Blueprints and Schematics
- Work Flow and Resources
- Proper Installation and Use of Testing and Auditing Materials and Equipment (Green Training)
- Understanding New Technologies and Changes to Industry Standards (Green Training)
- Proper Equipment Set-Up (Green Training)
- Safe Working Practices
- Advanced Instrumentation and Motor Controls
- Programmable Logic Controllers
- Advanced Welding
- Architecture Designs and Advanced Plan Reading

- Management and Monitoring of Materials
- Testing Materials and Equipment–Proper Set-Up and Use (Green Training)
- Understanding Changes to Industry Standards (Green Training)

❖ California Advanced Lighting Control Program (CALCTP)
- Advanced Lighting Control Systems
- Lighting Control Strategies
- Line Voltage Switching Controls
- Low Voltage Switching Control
- Dimming Controls
- Occupancy Sensors
- Photosensors

❖ CALCTP Acceptance Testing
❖ Electric Vehicle Infrastructure Training Program

BUSINESS SKILLS

❖ Teambuilding Skills
❖ Green Awareness Training and Green Certifications
❖ Leadership Skills
❖ Customer Service Skills
❖ Conflict Resolution
❖ Problem Solving
❖ Decision Making Skills
❖ Inventory Checklist
❖ Advanced Time Management
❖ Filling Out Work Documents and Reports Accurately
❖ Project Management
❖ Creating Project Bids

COMPUTER SKILLS

❖ Auto Computer-Aided Design (AutoCAD)
❖ Job Tracking System
❖ Scheduling & Planning Jobs

OSHA 10/30 (OSHA CERTIFIED INSTRUCTOR)

❖ OSHA 10 (requires completion of 10 hours)
❖ OSHA 30 (requires completion of 30 hours)

APPRENTICE

Class/Lab Hours
8 – 210 (Job Number 2)

COMMERCIAL SKILLS

- Safety
  - General Job-Site Safety awareness
  - First Aid/CPR Certification
  - Emergency Procedures
  - Compliance with OSHA, NFPA and EPA Regulations
  - Substance Abuse Awareness

- Tools, Materials and Handling
  - Proper Care and Use of Hand and Power Tools
  - Proper Rigging Methods
  - Proper Digging Techniques
  - Proper Use of Motorized Equipment; Platform Lifts, Fork-Lifts and Bucket Trucks
  - Proper Material Lifting and Handling

- Math
  - Appropriate Mathematical Calculations to Solve for Related Problems

- Electrical Theory
  - Basic Electro-Magnetic Principals
  - Ohm's Law
  - AC/DC Theory
  - Series, Parallel and Combination Circuits
  - Characteristics of Circuits; Voltage, Current, Power, Resistance, Impedance, Capacitance and Reactance
  - Theory of Superposition and Solving for Multiple Voltage-Sourced Circuits
  - Operation and Characteristics of Three-Wire Systems
  - Operation and Characteristics of Three-Phase Systems
  - Use of Electronics in the Electrical Industry
  - Code Requirements
  - National Electrical Code and Local Codes

- Conductors
  - General Characteristics
  - Conductor Installation Codes and Techniques
  - Methods for Selecting Proper Size and Type of Conductors

- Conduit and Raceways
  - Terms Associated with Conduits and Raceways
  - Procedures for Laying Out Various Types of Bends
  - Procedures for Making Proper Bends when Fabricating Conduits
  - Conduit Support Systems Recognized by Code

- First Aid/CPR

- ❖ Lighting Systems
  - Function, Operation and Characteristics of Various Lighting Systems
  - Lighting Distribution and Layout

- ❖ Installation and Connection of Fixtures
  - Over-Current Devices
  - Function, Operation and Characteristics of Over-Current Protection Devices
  - NEC Requirements for Over-Current Protection Devices
  - NEC Requirements for Ground-Fault and Arc-Fault Protection

- ❖ Grounding Systems
  - Functions, Operation and Characteristics of Grounding Systems
  - Sizing, Layout and Installation of Grounding Systems
  - Insulation and Isolation
  - Proper Grounding and Bonding Techniques
  - Special Circumstances

- ❖ Services and Distribution Systems
  - Function, Operation and Requirements for Various Panel Boards and Switch Gear
  - Grounding Requirements
  - Code Requirements

- ❖ Prints and Specifications
  - Creation of Blueprints Plans and Specification
  - Use of Blueprints, Plans and Specification
  - Recognizing Information Contained within Blueprints

- ❖ Motors, Motor Controllers and Process Controllers
  - Function, Operation and Characteristics of Motors (AC, DC, Dual-Voltage)
  - Proper Motor Installations
  - Motor Controllers, Control Circuits and Control Devices
  - Control Transformers, Switches and Relays
  - Instrumentation, Process Control Systems and Devices

- ❖ Generation and Power Supplies
  - Principles of Generating electricity
  - Principles of Alternative Energy Generating Systems
  - Installation and Maintenance of Uninterruptible Power Supplies
  - Installation and Maintenance of Emergency Battery Systems

- ❖ Transformers
  - Function, Operation and Characteristics of Transformers
  - Selection and Installation of Transformer Types
  - Transformer Grounding Techniques
  - Harmonics and Power Quality

- ❖ Personal Development
  - Orientation to Organization and Structures
  - Working with Others
  - Personal Financial Development

- ❖ Electrical Testing
  - Steps Used for Various Testing Processes
  - Proper Selection and Use of Test Meters
  - Utilizing the Results of Testing Procedures

- ❖ Specialty Systems
  - Fire Alarms
  - Security Systems

- ❖ CALCTP
  - Advanced Lighting Control Systems
  - Lighting Control Strategies
  - Line Voltage Switching Controls
  - Low Voltage Switching Control
  - Dimming Controls
  - Occupancy Sensors
  - Photosensors

- ❖ Electric Vehicle Infrastructure Training Program

OSHA 10 (OSHA CERTIFIED INSTRUCTOR)

- ❖ OSHA 10 (requires completion of 10 hours)

Safety training cannot exceed 10% of total training hours per trainee. This cap does not apply to OSHA 10/30 training.

Note: Reimbursement for retraining is capped at 200 total training hours per trainee in Job Number 1 and 210 total training hours per trainee in Job Number 2, regardless of the method of delivery.