



**Training Proposal for:
California Labor Federation, AFL-CIO
Agreement Number: ET15-0905**

Panel Meeting of: July 25, 2014

ETP Regional Office: San Francisco Bay Area **Analyst:** A. Nastari

PROJECT PROFILE

Contract Attributes:	SET Retrainee SB <100 Priority Rate	Industry Sector(s):	Construction Green Technology Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Statewide	Repeat Contractor:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Union(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Various Local Unions		
Turnover Rate:	≤20%		
Managers/Supervisors: (% of total trainees)	N/A		

FUNDING DETAIL

Program Costs	+	Support Costs	=	Total ETP Funding
\$634,800		\$43,920 8%		\$678,720

In-Kind Contribution:	50% of Total ETP Funding Required	Inherent
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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	Priority Rate SET Journeyman	Commercial Skills, Computer Skills, Business Skills, OSHA 10/30	50	8-200	0	\$564	\$27.09
				Weighted Avg: 24			
2	Priority Rate SET Apprentice	Commercial Skills OSHA 10	25	8-210	0	\$2,780	\$19.53
				Weighted Avg: 200			
3	Priority SET Apprentice (Bricklayers & Allied Crafts, Tracy)	Commercial Skills OSHA 10	47	8-210	0	\$2,780	\$14.38
				Weighted Avg: 200			
4	Priority SET Apprentice (Tri-County Electrical)	Commercial Skills OSHA 10	24	8-210	0	\$2,780	\$22.83
				Weighted Avg: 200			
5	Priority SET Apprentice (Santa Barbara County Electrical)	Commercial Skills OSHA 10	35	8-210	0	\$2,780	\$18.80
				Weighted Avg: 200			
6	Priority SET Apprentice (Fresno Sheet Metal)	Commercial Skills OSHA 10	10	8-210	0	\$2,780	\$13.71
				Weighted Avg: 200			
7	Priority SET Apprentice (San Joaquin & Calaveras Counties Electrical)	Commercial Skills OSHA 10	47	8-210	0	\$2,780	\$18.80
				Weighted Avg: 200			
8	Priority SET Apprentice (Central Valley Electrical)	Commercial Skills OSHA 10	36	8-210	0	\$2,780	\$15.71
				Weighted Avg: 200			
9	Retrainee Priority SET Apprentice (San Diego Plastering Industry)	Commercial Skills OSHA 10	5	8-210	0	\$2,780	\$18.31
				Weighted Avg: 200			

10	Retrainee Priority SET Apprentice (Bricklayers & Allied Crafts, San Diego)	Commercial Skills OSHA 10	5	8-210	0	\$2,780	\$20.86
				Weighted Avg: 200			

Minimum Wage by County: Job Number 1: \$27.09 SET Statewide Average Hourly Wage

Job Numbers 2 – 10: \$20.32 per hour Statewide (Priority Industry) or per union collective bargaining agreement

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

All Collective Bargaining Agreements provide for health benefits and the amount varies by union local.

Wage Range by Occupation		
Occupation Titles	Wage Range	Estimated # of Trainees
Job Number 1 Journeyman:		
Bricklayers & Allied Crafts		10
Electricians		20
Plasterers		10
Sheet Metal Workers		10
Job Numbers 2 – 10 Apprentice:		
Plasterers/Fireproofing Plasterers		25
Marble Mason/Finisher, Terrazzo Finisher/Mechanic, Pointer-Cleaner-Caulker, Bricklayers & Allied Crafts		47
Electricians		24
Electricians		35
Sheet Metal Workers		10
Electricians, Inside Wireman		47
Electricians		36
Plasterers		5
Marble Mason/Finisher, Terrazzo Finisher/Mechanic, Pointer-Cleaner-Caulker, Bricklayers & Allied Crafts		5

INTRODUCTION

The California Labor Federation, AFL-CIO (CalFED) seeks funding for a third statewide “Building Green Skills” training program. This project will be coordinated by the CalFED Workforce and Economic Development program.

Founded in 1901, CalFED is an umbrella organization comprised of 1,200 unions, representing 2.1 million union members in manufacturing, retail, construction, hospitality, the public sector, health care, entertainment and other industries in California. CalFED is a repeat contractor, and meets ETP eligibility requirements as a Workforce Investment Act recipient.

This proposal is designed to help workers in the various trades upgrade their skills to perform jobs in demand for commercial and industrial construction, public infrastructure projects, and “green” construction in California. This project will be funded under Special Employment Training (SET) given that the majority of signatory employers participating in training do not face out-of-state competition. The SET statewide wage may be modified to \$20.32 for this industry sector, which is recognized as a funding priority in the ETP Strategic Plan.

The SET Priority Industry wage will be used for Apprenticeship training in Job Numbers 2 - 10, even though apprentice Year 2+ union scale wages are generally higher, for ease of administration. Actual union wages will be used for Journeyman training in Job Number 1.

PROJECT DETAILS

Assisting Smaller Joint Apprenticeship Training Committees (JATCs)

This proposal is designed to help California create stable, middle class jobs for union workers in the building trades by funding small JATC programs throughout the state. The workers in the various trades need to upgrade their skills to perform jobs in demand for commercial and industrial construction, public infrastructure projects, and “green” construction in California. CalFED’s project acts as an incubator for smaller apprentice programs that do not have the staff capacity to hold their own ETP contract. For example many of the JATCs listed in this project have either a part time or no administrative assistance. Often, a training director acts as the director of the school, in addition to being a trainer and a trade worker. The goal is to “graduate” a JATC into its own ETP contract based on its performance under this proposal along with improvements in its DAS completion rate.

This proposal supports small JATCS operating in rural communities throughout the state including Fresno, Stockton, Tracy, Santa Barbara, and Modesto. Training will be in a series of occupations under nine JATCs. Of these nine, six JATCs participated in the prior ETP Agreement held by Cal-FED. One JATC “graduated” and will apply for ETP funding individually. The other two have chosen to not participate in this round of training.

Each JATC is an apprenticeship program sponsor. The occupations are shown below for each program sponsor. Job Numbers 2-10:

- Job No. 2: Bay Area Plastering Industry JATC
Golden Gate Lodge of Plumbers’ and Shophands’ Local No. 66
- Plasterers
 - Fireproofing Plasterers
- Job No. 3: Bricklayers & Allied Crafts Local 3 JATC & Education Committee
Bricklayers & Allied Craftworkers Local No. 3
- Marble Mason
 - Marble Finisher
 - Terrazo Mechanic
 - Terrazo Finisher
 - Pointer-Cleaner-Caulker
 - Bricklayer

- Job No 4: Tri-County Electrical JATC
Local No. 234 IBEW
- Electrician
- Job No. 5: Santa Barbara County Electrical JAC
Local No. 43 IBEW
- Electrician
- Job No. 6: Fresno Sheet Metal
Local No. 104
- Sheet Metal Worker
- Job No. 7: San Joaquin & Calaveras Counties Electrical JATC
Local No. 595 IBEW
- Electrician
 - Inside Wireman
- Job No. 8: Central Valley Electrical JATC
Local No. 684 IBEW
- Inside Wireman
- Job No. 9: San Diego Plastering Industry JATC
Local No. 200
- Plasterers
- Job No. 10: Bricklayers & Allied Crafts JATC
Bricklayers & Allied Craftworkers Local No. 4
- Marble Mason
 - Marble Finisher
 - Terrazo Mechanic
 - Terrazo Finisher
 - Pointer-Cleaner-Caulker
 - Bricklayer

Apprenticeship Pilot

Apprenticeship programs were established in California under the Shelley-Maloney Act of 1939. The Panel is authorized to fund Apprenticeship training so long as it does not displace any other source of government funds, or replace an existing apprenticeship program approved by the Division of Apprenticeship Standards (DAS). The Pilot provides reimbursement for the Related & Supplemental Instruction (RSI) portion of an apprenticeship training program. RSI is delivered as class/lab training.

Apprenticeship programs are typically created through collective bargaining, along with a trust fund, to ensure delivery of training over the course of a multi-year apprenticeship. Signatory employers to the Collective Bargaining Agreement pay into the trust fund for each hour worked by apprentices and journeymen. Labor and management appoint an equal number of representatives to the JATC, as trustees.

The trust funds are eligible to receive a limited amount of adult education funding (Montoya Funds). This funding is disbursed using a per-trainee rate, currently about \$5.00 per hour. To

ensure ETP does not displace Montoya Funds, Apprenticeship Pilot reimbursement is reduced by \$5.00, moving the priority industry rate from \$18.00 to \$13.00 per hour.

Apprentice wages start at a percentage of the Journeyman wage, with increases every six months. Employer-paid health benefits are included. ETP funding will only apply to apprentices in Year 2+ to ensure commitment. For ease of program administration, the post-retention wage will be SET statewide wage as modified for Priority Industry at \$20.32 or the wages negotiated through collective bargaining.

Need for Green Training

This project will incorporate trade-specific green skills training, which may be ancillary to traditional RSI. According to CalFED, construction trade employers are demanding this type of specialized skill, even from apprentices, given recent energy efficiency and renewable energy legislation. CalFED identified the following pertinent initiatives:

1. The CalGreen Building Code, adopted in January 2011, made California the first state to create statewide green building codes. On July 1, 2012, new changes to the code took effect. These changes create higher standards for conserving water, saving energy and improving indoor air quality.
2. The recently signed SB 829 that becomes law in 2013 establishes that local governments with blanket bans on Project Labor Agreements (PLA) for public works projects cannot receive any state funding for construction. PLAs ensure that local workers within a community get the work developed within their community – a practice which assist local participating employers to successfully compete for public works jobs.
3. California's Global Warming Solutions Act of 2006 (AB 32) supports green energy projects such as retrofitting the state's building stock, a key component of many of the state's policy initiatives. Commercial buildings alone are responsible for 37 percent of California's energy needs ("Untapped Potential of Commercial Buildings: Energy Use and Emissions," July 2010, Next 10).
4. Since January 2014 Title 24's new requirements have created major challenges for staffing California's unionized workers in the building trades. Due to changes in state energy requirements and the utilities, workers need to be trained for both installation of the systems along with being able to certify that the systems being installed comply with mandated requirements for building occupancy.

Training Plan

All training outlined in this proposal will be center-based and delivered by JATC instructors, who are experienced journeymen.

Commercial Skills (80% of the Journey Level and 90% of the Apprentice training) - Training will be mostly customized for each trade, although coursework will also be provided across all trades and occupations in energy audits, equipment installation, testing, and energy auditing, green awareness, blueprint reading, and welding.

Computer Skills (5% of the Journey Level training) - Training will include scheduling, planning and modeling software and AutoCAD applications that provide trainees with the ability to modify blueprints, look up project requirements, build budgets and timelines, design virtual buildings, and adjust computerized control systems.

Business Skills (5% of the Journey Level training) - Training will teach trainees how to work not only with workers within their trade, but also with other workers on construction projects. Because energy efficiency techniques and new computerization of work involves more coordination than project teams have needed in the past, improved business skills are essential. The proposed training will give trainees the tools to plan, organize and manage projects on-time completion. Training will include team-building, problem-solving, decision-making and leadership skills so that Journeymen can lead and participate effectively in a team environment.

OSHA 10/30 (10% of the Journey Level and Apprentice training)

OSHA 10/30 training is a series of courses “bundled” by industry sector and occupation. Typically, it is delivered to workers in the building trades. It consists of 10 hours of training for Apprentices and 10 or 30 hours for Journeymen. This training is not required as a condition of doing business in California. However, the coursework must be approved by, and the instructors must be certified by Cal-OSHA.

Completion of the training results in a certificate that expands employment opportunities. To ensure that each trainee receives certification, ETP will only consider payment earned upon completion of the full 10-hour or 30-hour course. OSHA 10/30 is not included in the 10% limitation on safety training.

Impact/Outcome

The JATCs will offer certification classes for OSHA 10/30, Green Audits, Arc Flash Safety Awareness, Building Automation Systems, Rigging and Lifting, Medical Gas Installer, Medical Gas Brazer, Foreman’s Certification, Industrial Rigger Certification and various welding certifications. Currently, there are minimal green certifications for the trades participating in this project. However, such certifications are becoming more widespread.

Feedback comes directly from the employers to the JATCs, based on workplace performance, requests of customers, and needs of the industry as well as course evaluations that are completed by both Journeymen and Apprentices trainees.

Curriculum Development and Feedback

The JATCs use national curricula developed by the international unions in concert with industry organizations such as the International Training Institute and the National Electrical Contractors Association (NECA) and Sheet Metal and Air Conditioning National Association (SMACNA). Curricula are then customized to address the needs of the local union membership, participating employers, and the local construction and green industry technologies and practices.

There will be new equipment/technology related to training for the participating employers, such as energy efficiency-based equipment. The equipment costs will be covered by the employers.

Training Coordination

The start of ETP training will vary by participating JATCs. At this time, the first training class is scheduled to begin July 25, 2014. Each JATC will be responsible for coordinating and scheduling training classes. While the training schedules vary from trade-to-trade, the majority of training will occur in the fall, winter and spring months.

Commitment to Training

In all instances, the training supplements, rather than displaces, current training provided by the JATCs and their employers and would not occur in the form and manner described without ETP funding. Currently, the core employers and JATCs provide journey and apprentice classroom and on-the-job training.

Marketing, Employer Recruitment & Support Costs

CalFED is requesting 8% in support costs to fund its staff in marketing and assessment. Individual JATCs will market the Journeyman program training programs through direct mailings, informational flyers, personal contacts, telephone calls, public service announcements, emails, and websites. JATCs prepare multimedia materials such as videos to inform employers, workers, students, and community organizations about new Apprenticeship, Journeyman, and green construction training opportunities. The JATCs also work with their local WIBs in actively recruiting Apprentices.

While most participating employers have already been notified, additional outreach and assessment will occur for journey and apprentice training. Assessment of employer-specific job requirements will occur throughout the term of the contract. CalFED staff will promote the training program at the California annual apprenticeship conference, statewide WIB meetings, labor-industry meetings and CalFED annual workforce development conference. In addition, email and face-to-face marketing to employers, contractors associations, and local unions will be ongoing and necessary to ensure the training program's success.

Each Training Coordinator along with his or her coordinators, administrative assistants, union representatives and trainers will be responsible for marketing, recruiting, conducting needs assessments, and scheduling training. Strategy Workplace Communications in Oakland assisted with development of this proposal at no cost and will provide ETP Contract administration services at a cost of no more than 13% of the funding earned.

Wage and Retention Modification

In Job Numbers 2, 3, 5-9, CalFED is requesting a modified wage for apprentices who currently earn wages less than the required \$20.32 per hour so that these apprentices may be included in the program. These are union scale wages for apprentices in year 2. The goal of this training is to upgrade skills for construction workers from apprentices to journeymen. Once part of the apprenticeship program, workers' wages progress at regular intervals until they reach the well-paid journey level.

For the building trades, where it is not customary for workers to be employed for 90 consecutive days with one employer, the Panel may substitute hours worked for retention. The modified retention period must be no less than 500 hours within 272 days with more than one employer. CalFED is requesting this modified retention period.

RECOMMENDATION

Staff recommends approval of this proposal.

ACTIVE PROJECTS

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

Agreement No.	Approved Amount	Term	No. Trainees in Contract	% of Trainees Enrolled	Approved Placed	No. Hours in Contract	% of Training Hours Uploaded
ET13-0904*	\$593,511	9/5/12–9/4/14	318	109%	218 (68%)	41,040	95%

*ET13-0904 – Cal Labor Fed’s administrative consultant submitted a Final Invoice on July 3, 2014, for 218 trainees (68%). Another 128 trainees completed retention and are currently under review. Training hours entered into the Online Tracking System is 41,040, potential earnings of \$593,511 (100%.)

PRIOR PROJECTS

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

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned \$ %
ET11-0310	Statewide	6/30/2011–6/29/2013	\$497,530	\$487,225 (98%)
ET09-0425	Statewide	1/27/2009–1/26/2011	\$1,196,092	*\$573,186 (48%)

*ET09-0425 - CalFED reports that performance was negatively impacted by the economic downturn in 2009. Funding for both residential and public works projects was either put on hold or no longer available, which kept the majority of construction workers unemployed or underemployed. The effects were twofold: (1) trainees could not satisfy the retention requirement; and (2) employer contributions to the JAC training funds were reduced which limited the amount of training that JATCs could conduct for journeymen. There were no apprentices in ET09-0425, only Journeymen, another factor that contributed to poor performance.

DEVELOPMENT SERVICES

CalFED retained Strategy Workplace Communications in Oakland to assist with development of this proposal at no cost.

ADMINISTRATIVE SERVICES

Strategy Workplace Communications will also perform administrative services in connection with this proposal for an amount not to exceed 13% of payment earned.

TRAINING VENDORS

N/A

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

8- 200 Job Number 1
(Journey Level)

Trainees may receive any of the following:

COMMERCIAL SKILLS
(For Electricians)

- Solar Panel Installation
- 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 Bonding
- 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 (NFPA 72)

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 (PLC)

- 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

- Confined Space Entry
- Specialized Tools
- Conduit Bending
- Rigging
- Firestop Installation
- Blueprints and Schematics
- Work Flow and Resources

CALCTP (California Advanced Lighting Control Program)

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

(Sheet Metal Workers)

- HERS (California Home Energy Rating System Program)
- Energy Auditing: Total Building (Green Training)
- Energy Auditing: Total Heating Ventilation and Air Conditioning (HVAC) Systems (Green Training)

- Ducts Maintenance
- Working with Building Materials Training
- Upgrading Lead Handling and Asbestos Removal Skills
- Proper Machine and Equipment Set-Up
- Advanced Welding Skills
- Architecture Designs
- Management and Monitoring of Materials
- Testing Materials and Equipment –Proper Set-Up and Use
- Materials and Equipment Testing for Industrial Use
- Understanding Changes to Industry Standards
- Safe Working Practices
- Rigging and Signal Training
- Lean Construction Training
- Job Coordination Training
- Fire/Life HVAC System Building Inspection Training
- CA Green Building Code Training

(All Trades)

- Energy Audits
- Welding and Burning
- Aerial Lift
- 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 (Training is capped 10% of a trainee's total hours)
- 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)

OSHA 10/30 (OSHA CERTIFIED INSTRUCTOR)

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

COMPUTER SKILLS

- Auto Computer-Aided Design (AutoCAD)
- Scheduling and Planning Jobs
- Automated Systems Applications Scheduling & Planning Jobs
- 3-D Modeling – Virtual Construction
- Benchmark Software – Lean Construction

BUSINESS SKILLS

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

Class/Lab Hours

24- 210 (Job Number 2 - 10)

Trainees may receive any of the following:

APPRENTICE CURRICULUM**COMMERCIAL SKILLS****(Electricians)**

- AC Refrigeration
- AC Theory
- Blueprints
- Building Automation and Controls
- Codeology: Code and Practices
- Conduits
- Control Diagrams and Drawings
- Circuits
- Digital Electronics, DC Theory and DC/AC Theory
- Distributed Generation
- Electrical Theory and Electrical Code
- Electrical Grounding
- Electrical Motors
- Electrical Safe Work Practices
- Electric Vehicle Infrastructure
- Estimating
- Fire Alarm Systems
- Generators and Transformer Theory
- Grounding and Bonding
- Hazardous Location
- Health Care Systems
- Industrial Blueprints
- Installer/Technician

- Closed Circuit Television
- Local Area Network
- Nurse Cal I System
- Paging System
- Radio Frequency Communications
- Sound Reinforcement
- Telephony
- Instrumentation
- Lighting Essentials and Protection
- Low Voltage Systems and High Voltage Systems
- Materials, Tools and Wire Methods
- Mechanical and Electric Benders
- Mathematics
- Motor Control
- National Electrical Code
- National Electric Code Grounding
- Over-current Protection
- Photovoltaic Systems
- Pipe Bending
- Power Quality
- Programmable Logic Controllers
- Rigging
- Security System
- Semiconductor Electronics
- Structured Cabling
- System Sec/Solar or Theory CD/B
- Test Instruments and Test Instruments Applications Manual
- Torque
- Transformers and Transformer Connections
- First Aid/CPR

(Plasterers)

- Workplace Safety and Health
- Fundamental Math
- Measuring
- Common Tools and Plastering Tools and Materials
- Mask and Protect Adjacent Surfaces
- Inspect Lath & Plaster Bases
- Mix and Apply Scratch Coat, Brown Coat, Finish Coat and Veneer
- Mix and Apply Inspect Lathing and Bases for Portland Cement Scratch Coat
- Mix and Apply Portland Cement Scratch Brown and Finish Coats
- Blueprint Reading
- Estimating
- Exterior Insulation Finish System

- Cementitious, Mineral Fiber and Intumescent Fireproofing
- Acoustical Plaster Finish
- Small Engine Operation and Maintenance
- Ornamental and Earth Plasters
- Green Building Standards
- First Aid/CPR

(Terrazzo)

- Blueprint Reading
- Building Codes
- Cleaning and Sealing Terrazzo
- Construction Sequence
- Cutting Control Joints
- Design Layout
- Floor Layout and Installation
- Green Construction, Design, Materials, Methods and Techniques, LEED Certification
- Grouting and Caulking
- Hand Tool and Equipment, Proper Use and Safety
- Illegal Discrimination and Sexual Harassment
- Materials, Identification, Characteristics, and Estimating
- Membranes and Underlayments
- Mixing Mortar and Bonding Materials
- Repair and Renovation of Terrazzo
- Scaffold Safety Training
- Substrates, Mixing and Bonding Materials
- Terrazzo Materials, Handling
- Trade Math
- First Aid/CPR

(Bricklayer)

- Blueprint Reading
- Building Arches
- Building Codes
- Building Radius Walls
- Construction Sequence
- Cutting and Welding Steel
- Drawing and Sketching Techniques
- Green Construction, Design, Materials, Methods and Techniques, LEED Certification
- Hand Tool and Equipment, Proper Use and Safety
- History of Masonry
- ICF (Insulated Concrete Forms)
- Illegal Discrimination and Sexual Harassment
- Interlocking Paving
- Laying Corner Leads
- Laying Headers, Soldiers, and Roloks

- Laying Piers
- Laying Pilasters
- Laying to the Line
- Lintel Beam Construction
- Materials, Identification, Characteristics, and Estimating
- Metrics
- Mixing Mortar
- Pattern Bonds
- Paving
- Proto II Walls
- Read a Rule
- Rebar Identification and Installation
- Scaffold Safety Training
- Segmental Retaining Walls
- Trade Math
- Transit Familiarization
- Waterproofing
- First Aid/CPR

(Marble, Pointer, Cleaner and Caulker Workers)

- Basic Bricklaying Fundamentals
- Blueprint Reading
- Building Codes
- Caulking
- Cleaning and Polishing Marble
- Cleaning Masonry
- Construction Sequence
- Cutting and Welding Steel
- Deck Coatings
- Drawing and Sketching Techniques
- Drilling and Cutting Marble to Specific Dimensions
- Epoxy Injection
- Fundamentals of Marble Setting
- Green Construction, Design, Materials, Methods and Techniques, LEED Certification
- Grouting and Caulking Slabs
- Hand Tool and Equipment
- Hand-Set Techniques
- Laying and Cutting Building Units
- Laying and Setting on Footings and Foundations
- Materials, Identification, Characteristics, and Estimating
- Mechanical Anchoring
- Metrics
- Mixing Mortar and Epoxy
- Move and Store, Rig and Hoist Materials
- Patching Marble and Related Materials
- Pinning

- Pointing, Caulking, and Cleaning
- Prepare Marble for Setting, Including Anchoring and Plugging
- Rigging
- Scaffold Erection and Safety Training
- Substructure Preparation
- Trade Math
- Tuckpointing
- Waterproofing
- First Aid/CPR

(Sheet Metal)

Building Trades Service

- Basic Electricity for Sheet Metal Air Conditioning Service
- Advanced Electricity for Sheet Metal Air Conditioning Service
- Air Conditioning, Commercial Systems, Heating
- Commercial Systems, Heat Loads, Piping
- Refrigeration for Sheet Metal Air Conditioning Service
- Properties of Air Distribution for Sheet Metal Air Conditioning Service
- Refrigeration Theory for Sheet Metal Air Conditioning Service
- Sheet Metal Control Systems
- First Aid/CPR

Energy Management Test and Balance

- Air Balance Test Equipment Instruments
- Temperature Measurement Instruments & Duct Systems
- Electrical Systems Operation, Controls & Devices
- HVAC Testing & Balancing Procedures
- Air Distribution & Manufacturing Systems
- Systems Installation & Troubleshooting
- Control Systems
- Hazardous Material Recognition for the Test & Air Balance Industry
- First Aid/CPR

Building Trades Sheet Metal

- Parallel Line Fittings
- Triangulation Fittings
- Radial Line Layout and Ogee Offsets
- Basics of Architectural Sheet Metal
- Architectural Sheet Metal
- Field Installation
- Welding I: Process and Safety Overview, GMAW
- Welding II: GMAW & FCAW
- HVAC Energy Conservation
- Plans and Specifications
- Submittals and Shop Drawings
- Industrial and Stainless Steel Introduction
- HVAC Air Systems and Duct Design

- Measuring and Sketching
- Fabrication and Shortcuts
- Codes and Standards
- Forman Training
- Metal Roofing
- Advanced Welding
- CAD Detailing
- Intermediate CAD
- Advanced Architectural
- Advanced Layout and Fabrication
- Project Management, Takeoffs, Estimates
- Service Basics for Sheet Metal Workers
- Final HVAC Project
- Final Architectural/Industrial Project
- First Aid/CPR

Residential HVAC

- Residential Structure and Sheet Metal Work
- Residential Duct Systems
- Residential AC Units
- Piping
- Filters and Filter Housings
- Common Furnace Features
- Furnace Installation
- Installing Thermostats, Flues and Vents
- First Aid/CPR

OSHA 10 (OSHA CERTIFIED INSTRUCTOR)

- OSHA 10 (requires completion of 10 hours)

Safety Training will be limited to 10% of total training hours per trainee (excluding OSHA 10/30)

Note: Reimbursement for retraining is capped at 200 total hours per trainee for Job Number 1 and 210 total hours for Job Numbers 2-10, regardless of method of delivery.