



**Training Proposal for:**

**Joint Apprenticeship and Training Committee of the Plumbing and Pipe Fitting Industry of San Mateo County**

**Agreement Number: ET16-0900**

**Panel Meeting of:** July 24, 2015

**ETP Regional Office:** San Francisco Bay Area      **Analyst:** D. Woodside

**PROJECT PROFILE**

Contract Attributes:	Retrainee Apprenticeship Priority Rate	Industry Sector(s):	Construction  Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
County Served:	San Mateo	Repeat Contractor:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Union:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   United Association (UA) of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada (UA Local 467)		
Turnover Rate:	≤20%		
Managers/Supervisors: (% of total trainees)	≤0%		

**FUNDING DETAIL:**

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #ffff00; text-align: center;"><b>Program Costs</b></td></tr> <tr><td style="text-align: center;">\$361,120</td></tr> </table>	<b>Program Costs</b>	\$361,120	+	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #ffff00; text-align: center;"><b>Support Costs</b></td></tr> <tr><td style="text-align: center;">\$25,004 8%</td></tr> </table>	<b>Support Costs</b>	\$25,004 8%	=	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #ffff00; text-align: center;"><b>Total ETP Funding</b></td></tr> <tr><td style="text-align: center;">\$386,124</td></tr> </table>	<b>Total ETP Funding</b>	\$386,124
<b>Program Costs</b>										
\$361,120										
<b>Support Costs</b>										
\$25,004 8%										
<b>Total ETP Funding</b>										
\$386,124										

**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	Commercial Skills, Computer Skills, OSHA 10/30	44	8-200	0	\$941	\$53.79
				Weighted Avg: 40			
2	Retrainee Apprentice Priority Rate	Commercial Skills, Computer Skills, OSHA 10	124	8-210	0	\$2,780	\$25.60
				Weighted Avg: 200			

**Minimum Wage by County:** \$20.55 per hour for 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
Journeymen (Plumber, Pipefitter, Refrigeration and Air Conditioning Fitter)		44
Apprentice (Plumber, Pipefitter, Refrigeration and Air Conditioning Fitter)		124

**INTRODUCTION**

For over 100 years, the Joint Apprenticeship and Training Committee of the Plumbing and Pipe Fitting Industry of San Mateo County (Plumbers JATC San Mateo or JATC) <http://www.ualocal467.org/training> has provided qualified workers to perform plumbing, pipefitting and HVAC (heating, ventilation and air-conditioning) services for employers throughout San Mateo County. This will be the first ETP Agreement for the Plumbers JATC San Mateo County.

Plumbers JATC San Mateo was formalized in 1955 with the establishment of the Pipe Trades Apprentice and Journeyman Training Trust Fund. The Fund is governed by a Board of Trustees comprised of six labor and six management representatives, and is a joint effort of the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada (UA Local 467), and the Plumbing-Heating-Cooling Contractors Association of the Greater Bay Area.

The 180 signatory employers cover the geographic area from South San Francisco (including the San Francisco Airport) to East Palo Alto. Signatory employers (primarily building and plumbing contractors) employ 135 Apprentices and 765 Journeymen in heavy industrial,

manufacturing, commercial and residential sectors. Approximately 60% of the signatory employers meet the Panel's definition of a small business.

### **Employer Demand for Training**

The proposed training will prepare Apprentice and Journeymen plumber, pipe fitter, and HVAC fitters for current and future construction projects slated for San Mateo County. Examples include construction for new biotechnology start-ups and a continued expansion in pharmaceutical manufacturing facilities for Genentech, Inc. and Gilead Sciences, Inc. For instance, Gilead is remapping its entire Foster City facility, constructing 17 new buildings over a 72-acre site.

In addition, the vacancy rate for life science manufacturing, research, and office space from San Francisco to Palo Alto is now below 1%. This lack of space necessitates new construction and retrofitting. Other construction projects include Britannia Cove at Oyster Point in South San Francisco, a massive business complex including two buildings each at 253,000 square feet. New construction at the San Francisco Airport is on-going and includes a new Air Traffic Control Tower and \$10 million in planned construction projects. All of these projects generate employer demand for experienced journeymen and new apprentices to install and maintain complex piping and plumbing systems.

### **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 Related and Supplemental Instruction (RSI) portion of DAS-approved apprenticeship training. Affiliated with Foothill College as its LEA, the JATC offers a five-year apprenticeship program. This requires an Apprentice to have over 10,000 hours of on-the-job training as well as over 1,200 hours of RSI. Classroom delivery of RSI is at the JATC facility using qualified instructors approved by the LEA.

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) or Unilateral Apprenticeship Committee (UAC). A JATC is created through collective bargaining, with an equal number of members appointed by union and management, as compared to a UAC which is created through a trade association. Both types require employer contributions to a training trust fund.

Depending on the type of trade, apprenticeship programs vary in length, typically from 2-6 years. They also vary in size, ranging from less than 10 to several hundred apprentices at any given point in time. Several types of trainees are eligible under the Apprenticeship Program: Apprentices (second-year), Journeymen and Pre-Apprentices. First-year Apprentices are not eligible due to the higher drop-out rates associated with this entry-level.

ETP funding flows through a Multiple Employer Contract (MEC), as in this proposal. 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 the designated LEA. 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 ( $\leq 100$  employees). This is \$22 per hour, midway between the Priority Industry standard rate (\$18) and Small Business rate (\$26). [Note: This “blended rate” has been extended to Pre-Apprentices, for ease of administration.]

Under the Apprenticeship Training Program, the post-retention wage has been standardized to a minimum of \$20.55 per hour reflecting the Special Employment Training (SET) wage for Priority Industry. This wage was chosen for ease of administration, recognizing that most Apprentices and all Journeymen exceed the highest ETP wage requirements.

### **DAS Completion Rates**

The completion rate for this DAS-approved program for 2009-2013 is 77.98% and exceeds the industry completion percentage of 48.01%. This meets ETP standards.

### **PROJECT DETAILS**

The JATC operates a 30,935 square-foot training center in Burlingame with 15 classrooms and laboratories equipped for specialized skills. This includes welding along with specialty subjects such as medical gas installations for biotechnology manufacturers and hospitals. Apprentice and Journeyman welders will receive medical gas certifications after successful completion of this training.

### **Training Plan**

This training will give Apprentice and Journeymen the skills they need to complete jobs quickly with the highest quality workmanship. Training will be delivered by experienced Journeyman workers in the trade. No outside training vendors will be used. Instructors attend special courses provided by the United Association Instructor Training Program to stay current with changes in the industry. The instructors also create customized teaching materials, giving students up-to-the-minute, state-of-the-art information on codes, materials, and processes not found in traditional textbooks.

## **Apprenticeship Training**

**Commercial Skills (90%)** – Apprentices will learn to assemble, install, and repair pipes, fittings and fixtures for heating, water, and drainage systems, according to specifications and plumbing codes. Coursework will include industry math and the ability to study building plans and drawings to determine equipment needs on each job. Skills to be learned include the operation of cutting torches and pipe threading machines, and the ability to determine the sequence of installation. Coursework includes fabrication, assembly, installation and maintenance of piping and plumbing systems, fixtures, and equipment for steam, hot water, heating, cooling, sprinkling and industrial processing systems.

Apprentices will learn to assist in the installation of heating and air conditioning systems including assembling and installing a variety of piping for air, ammonia, gas and water systems. Training on electrical installation and wiring for HVAC equipment, including switches and controls; as well as on the recovery of refrigerant gasses will be provided. Trainees must also learn to test and balance air and water systems using the latest technologies.

**Computer Skills (7%)** - 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 systems, and adjust computerized control systems.

**OSHA 10 (3%)** - Training will be delivered to Apprentices to ensure safe working conditions and fulfill current mandates requiring 25% to 40% of an employer's on-site workforce be OSHA certified.

## **Journeyman Training:**

**Commercial Skills (80%)** - Trainees will receive training in the use of new plumbing and piping equipment, updated building standards, emerging technologies, and green business practices. Training will meet employer demand to develop, retrofit, and maintain more efficient water flow into and out of buildings. Training will also focus on energy-efficient technologies and products such as green building materials; solar installations; new motor controls and programming; advanced orbital, TIG, and Medical Gas Welding; and advanced testing and audit equipment.

**Computer Skills (13%)** - 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 (7%)** - Training will be delivered to Journeyman trainees. This training provides a complete overview of occupational safety and health so that workers are more knowledgeable about workplace hazards.

## **OSHA 10/30**

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.

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. When delivery is by CBT all training hours must be delivered in a classroom over a finite amount of time, and the vendor must have a certified instructor present to confirm attendance.

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.

### **Curriculum Development**

Plumbers JATC San Mateo's labor and management representatives have customized the national plumber, pipe fitters curriculum to address the local needs. The JATC also collaborated with the National Competency Testing Institute to create an industry-driven curriculum. All courses are designed to address employer needs as determined by their customers and energy efficiency and technology changes that are quickly becoming standard in the plumbing industry. Hiring demands help shape the curriculum, such as the need for workers with the ability to weld on technically advanced construction projects.

Feedback on training content and delivery comes directly from the employers and union representatives based on workplace performance, requests of customers, and needs of the industry as well as course evaluations that are completed by students. Thus, the curricula for both apprentices and journeyman 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.

### **Trainer Qualifications**

Plumbers JATC San Mateo employs 14 full and part-time trainers. All trainers are former or current members of the trade. Some have received Master Certification status by the National Joint Apprenticeship and Training Committee. As noted earlier, all, instructors meet standards set by the LEA.

### **Training Outcomes**

Certifications earned for the journey-level and apprenticeship training to be funded by ETP may include: OSHA 10, OSHA 30, HVAC Star, Medical Gas Installer, Medical Gas Brazer, Foreman's Certification, Industrial Signal Person Certification, and various welding certifications.

### **Marketing and Support Costs**

Plumbers JATC San Mateo 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 workers within the jurisdiction, as well as to the pipe trades contractors who employ them.

Application announcements for the apprentice program will be sent to local, state, and federal agencies as well as to local high schools, community colleges, and community-based organizations. Classes for the journeymen and apprentices are offered January through May and August through December.

Training Director of JATC San Mateo, working with a dedicated administrative assistant, will be responsible for marketing, recruiting, needs assessments, and scheduling. The JATC is requesting 8% in support costs to fund its staff in recruiting, qualifying, and assessing participating employers for this program. The projected budget costs for personnel alone, especially for a first-time ETP MEC Contractor, will exceed the ETP support cost funding. The JATC will cover these additional expenses. 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. General safety training is provided by the signatory employers in accordance with all pertinent requirements under state and federal law.

**Tuition Reimbursement**

In accordance with Title 22, CCR, Section 4412.1, Plumbers JATC San Mateo represents that students enrolled in the ETP-funded program will not be charged tuition, fees, or any other costs associated with training. The representation will be made a condition of the Agreement.

**RECOMMENDATION**

Staff recommends approval of this proposal.

**DEVELOPMENT SERVICES**

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

**ADMINISTRATIVE SERVICES**

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

**TRAINING VENDORS**

N/A

**Exhibit B: Menu Curriculum**

Trainees may receive any of the following:

**Class/Lab Hours**

8-200 (Job Number 1)

**Journeyman Training****COMMERCIAL SKILLS**

- ✚ Green Compliance
  - Energy Efficiency in Existing Equipment and Materials
  - Design and Installation of New Energy Efficient Equipment and Materials
  - LEED Standards
- ✚ BACnet Programming
- ✚ Johnson Controls Courses
- ✚ Robotic Total Station
- ✚ Start Test and Balance
- ✚ Solar Installations
- ✚ Specialty Seminars for Service Work
- ✚ Johnson DX9100 (Brand of Digital Controller)
- ✚ Compressor Overhaul
- ✚ Direct Digital Controls – Principals of Operation, Calibration, Documentation, Shutdowns
- ✚ Orbital Welding
- ✚ Welding
- ✚ Brazing
- ✚ Safe Working Conditions (All training supplements Cal-OSHA required safety training)
  - Foreman and Worker Responsibility
  - Scaffolding
  - Fall Protection
  - Electrical Safety
  - Falling Objects
  - Working in Confined Spaces
  - Working Around Pipelines
- ✚ Certifications
  - Industrial Rigging
  - Signalperson
  - National Environmental Balancing Bureau (NEBB) Commissioning (Certification for Heating & Cooling Systems)
  - Medical Gas -- Installation, System Testing, Maintenance, Repair, Standards and Brazing
  - Foreman
  - Backflow
  - Orbital Welding
  - TIG (Tungsten Inert Gas) Welding
  - Star Review

**COMPUTER SKILLS**

- ✚ Computer-Aided Drafting (CAD)
- ✚ 3-D Drawings Software

**OSHA 10/30 (OSHA CERTIFIED INSTRUCTOR)**

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

**Class/Lab Hours**

8-210 (Job Number 2)

**Apprentice Training****COMMERCIAL SKILLS****Plumbing and Steamfitting**

- ✚ 2<sup>nd</sup> year
  - Code/Water Supply
  - Drawing I
- ✚ 3<sup>rd</sup> year
  - Drawing II
  - Welding
  - Oxygen / Acetylene Training
  - Pipe Fitting
- ✚ 4th year
  - Steam Systems
  - Rigging
  - Pipefitting and Service
  - Hydronics/ Steam
  - Medical Gas Certification
  - Signal Person Certification
- ✚ (5th year)
  - Advanced Drawing/Layout
  - Code II
  - Junior Mechanics Review and Exam

**Refrigeration**

- ✚ 2nd year
  - Basic Electricity
  - Advanced Electricity
  - Pneumatic DDC Introduction
- ✚ 3rd year
  - Controls I
  - Electro Pneumatics
  - Controls II
  - Advanced Pneumatics
  - Calibration
  - Hydronics
- ✚ 4th year
  - Start, Test and Balance I
  - Start, Test and Balance II
- ✚ 5th year
  - Chillers
  - HVAC Star Certificate

- Special Systems
- Heating Ventilation Air Conditioning Refrigeration Star Review and Exit Exam

#### All Years

- ✚ Trade Math
- ✚ Industry Math
- ✚ Rigging
- ✚ Drawing
- ✚ Blueprint Reading
- ✚ Welding
- ✚ Cutting
- ✚ Industrial Safety
- ✚ Industrial Install
- ✚ Medical Gas Install
- ✚ Backflow Certification
- ✚ Foreman Certification
- ✚ Rigging Certification
- ✚ Direct Digital Controls
- ✚ Compressor Overhaul

#### **COMPUTER SKILLS**

- ✚ Computer-Aided Drafting (CAD)
- ✚ 3-D Drawings Software

#### **OSHA 10/30 (OSHA CERTIFIED INSTRUCTOR)**

- ✚ OSHA 10 (requires completion of 10 hours)

Note: Reimbursement for Job Number 1 Journeymen retraining is capped at 200 total training hours per trainee regardless of the method of training delivery. Reimbursement for Job Number 2 Apprenticeship training is capped at 200 total training hours per trainee in Commercial Skills and 10 hours of OSHA10 for a total of 210 hours regardless of the method of training delivery. Safety training cannot exceed 10% of total training hours for any individual trainee. This 10% safety training cap does not apply to Hazardous Materials or OSHA 10/30 training.