



Appendix A

WORK PROCESS SCHEDULE

AND

RELATED INSTRUCTION OUTLINE



Appendix A

WORK PROCESS SCHEDULE

OCCUPATION TITLE: PLUMBER

O*NET-SOC CODE: 47-2152.02

RAPIDS CODE: 0432

This schedule is attached to and a part of these Standards for the above-identified occupation.

1. TYPE OF OCCUPATION

Time-based Competency-based Hybrid

2. TERM OF APPRENTICESHIP

The term of the occupation is four years with an OJL attainment of 8000 hours, supplemented by the minimum required 578 hours of related instruction with a probationary period of 1 year or 2000 OJL hours, whichever is shorter.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journeyworker ratio is one (1) apprentice to one (1) journeyworker per job site.

4. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journeyworker wage rate, which is: \$13.55 per hour.

PERIODS:

1 st	6 months (1000 hours) = \$9.00	2 nd	6 months (1000 hours) = \$9.65
3 rd	6 months (1000 hours) = \$10.30	4 th	6 months (1000 hours) = \$10.95
5 th	6 months (1000 hours) = \$11.60	6 th	6 months (1000 hours) = \$12.25
7 th	6 months (1000 hours) = \$12.90	8 th	6 months (1000 hours) = \$13.55

5. WORK PROCESS SCHEDULE (See attached Work Process Schedule)

The sponsor may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

6. RELATED INSTRUCTION OUTLINE (See attached Related Instruction Outline)



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<u>OJL CORE COMPETENCIES</u>	<u>HOURS</u>
Basic Safety (Construction) / Site Safety Orientation	50
Site/Project Preparation and Maintenance	50
Introduction to Hand Tools and Power Tools	50
Introduction to Materials Handling	100
Introduction to the Construction Trade and Construction Drawings	50
Equipment Maintenance	100
Construction Safety / OSHA-10 / CPR, First Aid and AED	100
Plan Reading and Interpretation	600
Care of Tools, Materials and Equipment	600
Preparation of Tools, Material and Equipment	600
Pipe Cutting, Threading, Reaming and Welding	1250
Installation of Underground Piping and Accessories	750
Wet Pipe Systems	1400
Dry Pipe Systems	500
Standpipe Systems	500
Special Hazard Installation	350
Installation of Fire Pumps and Accessories	350
Maintenance and Repairs	600
TOTAL HOURS	8000



RELATED INSTRUCTION OUTLINE

OCCUPATION TITLE: PLUMBER

O*NET-SOC CODE: 47-2152.02

RAPIDS CODE: 0432

Related instruction -

The following training curriculum will be provided by the program sponsor and their certified and designated program instructor(s).

<u>Curriculum:</u>	<u>HOURS</u>
Basic Safety (Construction), Site Safety Orientation, Orientation to Trade	12
Basic Construction Math and Drawings	12
Introduction to Hand Tools	16
Introduction to Power Tools	16
Tools for Copper, Plastic, Soil and Steel Pipe	16
Welding	20
Lead Safety and Hazards	12
Introduction to Components and Systems	14
Introduction to Materials Handling	14
Introduction to the Trade, Standards, Codes	14
Basic Safety and First Aid, CPR	10
Safe Work Practices, OSHA-10 Course and Plumbing Safety Manuals	16
Blueprint Reading and Shop Drawings	12
Steel Pipe	16
CPVC Pipe and Fittings	10
Copper Tube Systems	16
Underground Pipe	24
Water Sources, Disposal, Sewage Systems	24
Introduction to Gases and Mechanical Properties of Materials, Structures	30
Gas Piping Systems	16
Wet Pipe Fire Sprinkler Systems	12
Dry Pipe Systems	16



Hot and Cold Water Systems	20
General Purpose Valves	16
Installation Practices for Plumbing Fixtures, Fittings, Valves, Etc.	20
Installation of Piping for Gas, Hot and Cold Water (Domestic)	20
Installation for Piping for Waste, Soil, Sewage, Vent, Etc.	20
Installation of Pumps	20
Sprinkler Systems	20
System Layout	24
Inspection, Testing and Maintenance	24
Maintenance and Repair of Water and Gas Systems	36
Procedures and Documentation	10
TOTAL RTI HOURS	578



The Northside Independent School District Construction Careers Academy will recognize specialized competencies of the plumber occupation.

Apprentices must complete the following number of related instructional hour to accompany the required on-the-job learning hours for recognition of a specialized competency. The program sponsor will use the on-the-job learning gained through work experience and conduct a performance evaluation to certify acquisition of the skills required for the recognition of a specialized competency.

Overall apprenticeship completion will be obtained when the apprentices have complete all on-the-job learning and the related theoretical instruction as identified in this work process for the plumber occupation.

ON-THE-JOB LEARNING WORK PROCESS FOR SPECIALIZED COMPETENCIES

Installation of Underground Piping and Accessories	750
Installation of Fire Pumps and Accessories	350

RELATED THEORETICAL INSTRUCTION COURSE MATERIAL / TOPIC

Required Core Theoretical Instruction Requirements for Specialized Competencies

Basic Safety (Construction), Site Safety Orientation, Orientation to Trade	12
Basic Construction Math and Drawings	12
Introduction to Hand Tools	16
Introduction to Power Tools	16
Tools for Copper, Plastic, Soil and Steel Pipe	16
Welding	20
Lead Safety and Hazards	12
Introduction to Components and Systems	14
Introduction to Materials Handling	14
Introduction to the Trade, Standards, Codes	14
Basic Safety and First Aid, CPR	10
Safe Work Practices, OSHA-10 Course and Plumbing Safety Manuals	16
Blueprint Reading and Shop Drawings	12
Total Hours Required	184



Specialty Area Theoretical Instruction Requirements for Specialized Competencies.

The required number of instructional hours will vary based on the specialized competency sought and the on-the-job learning hours obtained with participating employers.

Apprentices must complete a minimum of 288 hours of related instruction hours for recognition of a specialized competency. Apprentices may acquire more on-the-job learning hours based on the on-the-job learning with participating employers.

Steel Pipe	16
CPVC Pipe and Fittings	10
Copper Tube Systems	16
Underground Pipe	24
Water Sources, Disposal, Sewage Systems	24
Introduction to Gases and Mechanical Properties of Materials, Structures	30
Gas Piping Systems	16
Wet Pipe Fire Sprinkler Systems	12
Dry Pipe Systems	16
Hot and Cold Water Systems	20
General Purpose Valves	16
Installation Practices for Plumbing Fixtures, Fittings, Valves, Etc.	20
Installation of Piping for Gas, Hot and Cold Water (Domestic)	20
Installation for Piping for Waste, Soil, Sewage, Vent, Etc.	20
Installation of Pumps	20
Sprinkler Systems	20
System Layout	24
Inspection, Testing and Maintenance	24