

O.19
WORK PROCESS SCHEDULE
SPRINKLER FITTER
O*NET-SOC CODE: 47-2152.00 RAPIDS CODE: 0414

This trade schedule is attached to and a part of the Apprenticeship Standards for the above identified occupation. This sequence of Related Classroom Instruction is competency based and will be offered as traditional classroom training or independent study, which may include electronic media.

1. TERM OF APPRENTICESHIP

The term of the occupation shall be four (4) years with an OJL attainment of 8,000 hours supplemented by the required hours of related technical instruction.

2. RATIO OF APPRENTICES TO JOURNEYPERSONS

One (1) Apprentice to one (1) Journeyman: one apprentice for the first skilled journeyman employed, and one additional apprentice for each additional skilled journeyman employed thereafter.

3. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journeyman wage rate.

Term: 8,000 Hours

- 1st 1000 hours = 40 % of journeyman's rate
- 2nd 1000 hours = 45 % of journeyman's rate
- 3rd 1000 hours = 50 % of journeyman's rate
- 4th 1000 hours = 55 % of journeyman's rate
- 5th 1000 hours = 60 % of journeyman's rate
- 6th 1000 hours = 65 % of journeyman's rate
- 7th 1000 hours = 70 % of journeyman's rate
- 8th 1000 hours = 75 % of journeyman's rate

4. SCHEDULE OF WORK EXPERIENCE (See attached Work Process Schedule)

Apprenticeship Oversight Committee may add to the work processes prior to submitting these Standards to the Division of Apprentice Training for approval.

5. SCHEDULE OF RELATED TECHNICAL INSTRUCTION (See attached Related Classroom Instruction Outline)

Instruction can incorporate elements of both electronic media and traditional classroom including online training, distance learning, or independent study of established curriculum.

Curricula modules are based on industry standardized applications of current construction practices. Modules are knowledge and skill based including a system for assessment. The

assessment will include task objectives, procedures, review materials, and competency-based performance tests.

O.19- WORK PROCESS SCHEDULE

HOURS

This instruction and experience shall include the following operations, but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Plan reading and interpretation	750
a. Reading shop drawings	
b. Symbols and abbreviations	
c. Familiarization with NFPA's #13, 14, 20 and 24	
2. Care of tools, materials, and equipment	800
a. Identifying materials, grades and types of pipe, fittings, valves, hose and equipment, and sprinkler heads	
b. Use and operation of trade tools	
c. Maintaining and servicing of tools and equipment	
3. Preparation of tools, material and equipment	650
a. Selection of pipe, fittings, hangers and devices for rough and distribution and finish work	
b. Loading of required materials and equipment	
c. Unloading of materials and equipment at job site using safety precautions and care in not damaging materials for equipment	
d. Set up and use of rigging, scaffolding and mechanical lifts and platforms	
4. Pipe cutting, threading, reaming and welding	1250
a. Use of hand cutters	
b. Use of dies and reamer	
c. Set up and operation of power threading machine	
d. Operation of power drills	
e. Operation of torch and welder	
5. Installation of underground piping and accessories	650
a. Installation of cast iron pipe and fittings	
b. Installation of plastic pipe and fittings	
c. Installation of valves, post indicators and hydrants	
d. Rodding and thrust block installation	
e. Valve pit installation	
f. Flushing and testing of underground piping	
6. Wet pipe systems	1600
a. Distribution of system	
b. Installation of feed main and cross main, grooved, screwed and welded	
c. Branch line installation on exposed systems	
d. Branch line installation for concealed piping with drop nipples	
e. Hanger types and installation	
f. Trimming of valves including Siamese connection installation	
g. Set up and testing of system	

7. Dry pipe systems	500
a. Distribution of system	
b. Installation of feed main and cross main, grooved, screwed and welded	
c. Branch line installation on exposed systems	
d. Hanger types and installation	
e. Trimming of valves including Siamese connection installation	
f. Set up and testing of system	
8. Standpipe systems	500
a. Distribution of system	
b. Pipe installation	
c. Installation of hose, hose VA's, nozzles and accessories	
d. Testing procedures	
9. Special hazard installation	350
a. Installation of deluge systems	
b. Installation of pre-action systems	
c. Installation of halon systems	
d. Installation of carbox systems	
e. Installation of fire extinguishers	
10. Installation of fire pumps and accessories	350
a. Setting of fire pumps and jockey pumps	
b. Alignment of fire pump and driver	
c. Trimming of fire pump, jockey pump and controllers	
d. Start up and testing of fire pumps and equipment	
11. Maintenance and Repairs	600
a. Fabrication and installation of pipe on job site	
b. Care in cutting and patching of walls and ceilings	
c. Repair and replacement of system components	
d. Restoring system to service	
e. Notifying owner, fire department, insurance company of impairment to system	
TOTAL HOURS	8000

O.19 - SPRINKLER FITTER RELATED CLASSROOM INSTRUCTION

Note: Due to regional and local code differences and climate conditions, duration of instructional competencies/modules is suggested estimates only.

Modules	Hours
Basic Safety	15
Introduction to Construction Math	15
Introduction to Hand Tools	10
Introduction to Power Tools	5
Introduction to Blueprints	7.5
Basic Rigging	20
Introduction to the Trade	6
Hangers, Supports, Restraints, and Guides	12
Threaded Steel Pipe	15

Flanged, Grooved, and Plain End Fittings	45
Plastic Pipe	9
Copper Tube Systems	9
Underground Pipe	12
Introduction to Sprinklers	9
Standard Sprinklers	21
Special Sprinklers and Nozzles	24
General Purpose Valves	15
Wet Fire Sprinkler Systems	36
Dry-Pipe Systems	45
General Trade Math	33
Construction and Plans	33
Water Supplies	15
Standpipes	24
Preaction/Deluge Systems	39
Fire Pumps	36
Special Extinguishing Systems	42
System Design	36
Inspection and Maintenance	15
Foremanship	15
TOTAL HOURS	618.50

DAT apprenticeship program standards recommend 150 hours of related technical instruction per year.