

O.17
WORK PROCESS SCHEDULE
ROOFER
O*NET-SOC CODE: 47-2180.00 RAPIDS CODE: 0480

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 three (3) years with an OJL attainment of 6,000 hours supplemented by the required hours of related technical instruction.

2. RATIO OF APPRENTICES TO JOURNEYPERSONS

Roofers East: 1:5, 2:6 - 10, Thereafter 1:10 (or portion thereof). Roofers West: 1:3 (or portion thereof)

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: 6,000 Hours

East

1st 2000 hours = 50 % of journeyman's rate
2nd 1000 hours = 60 % of journeyman's rate
3rd 1000 hours = 65 % of journeyman's rate
4th 1000 hours = 75 % of journeyman's rate
5th 1000 hours = 85 % of journeyman's rate
(Step one is 2,000; Steps 2-5 are 1,000)

West

1st 750 hours = 60 % of journeyman's rate
2nd 750 hours = 65 % of journeyman's rate
3rd 750 hours = 70 % of journeyman's rate
4th 750 hours = 75 % of journeyman's rate
5th 750 hours = 80 % of journeyman's rate
6th 750 hours = 85 % of journeyman's rate
7th 750 hours = 90 % of journeyman's rate
8th 750 hours = 95 % 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.17- WORK PROCESS SCHEDULE	HOURS
<p>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.</p>	
<p><u>General</u></p> <ul style="list-style-type: none"> Loading, unloading and hoisting materials and tools. Erecting of roof scaffolds and ladders Learning safety procedures as they relate to the handling of tar, roof scaffolds, ladders, tools and hazardous waste materials Measuring, cutting and fitting roofing materials 	650
<p><u>Built Up Roofing (BUR)</u></p> <ul style="list-style-type: none"> Applying layers of insulation on roof-deck Spreading molten bitumen over insulation Applying partially overlapping layers of roofing felt over insulated surface Sealing seams using additional hot bitumen Finishing top layer by glazing to smooth finish or embedding gravel for rough finish Operating kettles and tankers 	1500
<p><u>Single-Ply Roofing</u></p> <ul style="list-style-type: none"> Applying liquid membrane Applying EPDM, PVC, Hypolon and other single-plys Applying modified bitumen 	1300
<p><u>Slope Roofing</u></p> <ul style="list-style-type: none"> Applying underlayment over entire roof Nailing shingles Application of slate, tile or terra cotta shingles Installing flashing 	650
<p><u>Damp proofing and Waterproofing</u></p> <ul style="list-style-type: none"> Applying roofing materials to structures such as shower pans, decks and promenades Spraying or painting waterproofing materials; attaching waterproofing membrane Applying pipe-coating Applying hot waterproofing material Applying sheet waterproofing material 	850

<u>Repairing</u>	400
Repairing roofing shingles; repairing broken slate or tile	
Repairing single0-plys	
Repairing BUR	
<u>Repairing Removal and Cleaning</u>	400
<u>Assembly, Maintenance and Operation of Roofing Machinery and Equipment</u>	250
TOTAL HOURS	6000

O.17 - ROOFER RELATED CLASSROOM INSTRUCTION

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

<u>Modules</u>	<u>Hours</u>
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
Nails, Fasteners and Adhesives	7.5
Concrete and Reinforcement Materials	10
Fasteners, Hangers and Supports	7.5
Steel and Other Metals	2.5
Introduction to Sheet Metal Layout and Processes	7.5
Bolting and Aligning	5
Roof Framing	37.5
Soldering	15
Gutters and Downspouts	10
Roof Flashing	7.5
Trim and Flashing	10
Roof Panel Types and Systems Design	10
Installing Standing Seam Roof Systems	32.5
Installing Lap Seam Roof Systems	12.5
Physical Characteristics/ Properties of Metals	
Introduction to Welding, Brazing and Cutting	20
Roofing Applications	25
Installation of Cornices, Gutters, and Downspouts	12
Fabrication II-Radial Line Development	55
Reroofing	20
Roof Coatings	
Shop Production and Organization	25

Fabrication IV-Comprehensive Review

60

TOTAL HOURS

464.50

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