



NEVADA LABOR COMMISSIONER
NEVADA STATE APPRENTICESHIP COUNCIL
2022 Non-Joint Standards of Apprenticeship

Appendix A

WORK PROCESS SCHEDULES AND RELATED INSTRUCTION OUTLINE

Pole Line Contractors, Inc.

LINE INSTALLER / REPAIRER

O*NET-SOC CODE: 49-9051.00 RAPIDS CODE: 0282

**APPROVED BY
THE NEVADA LABOR COMMISSIONER AND THE NEVADA STATE APPRENTICESHIP COUNCIL**

Toni Giddens, Nevada State Apprenticeship Director

REGISTRATION DATE: _____

RAPIDS PROGRAM ID NUMBER: _____

**DEVELOPED IN COOPERATION WITH THE
THE NEVADA LABOR COMMISSIONER, THE NEVADA STATE APPRENTICESHIP COUNCIL AND
THE U.S. DEPARTMENT OF LABOR**

Appendix A

WORK PROCESS SCHEDULE

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 shall be defined by the attainment of all competencies of the position. The program uses a time-based approach, requires the completion of not less than 2,000 hours of [work experience,] on-the-job learning, consistent with a minimum of 144 training hours per year and training requirements as established by practice in the trade.

This would be expected to occur within approximately 8000 hours of OJL, 694 classroom hours, supplemented by the minimum of 2,000 hours of OJL, 144 hours of related instruction per year of the apprenticeship.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journey worker/fully trained worker ratio is: 1 apprentice(s) to journey worker/fully trained worker(s).

4. APPRENTICE WAGE SCHEDULE

An apprentice minimum starting wage will be at least \$16.00 per hour. Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journey worker/fully trained worker wage. A journey worker/fully trained worker minimum wage will be at least \$32.00.

1-Year Term Example:

1st Year = 50% or \$16.00

2nd Year = 60% or \$19.20

Periodic review and evaluation of the apprentice's on-the-job learning and related technical instruction will be conducted in alignment with the wage schedule established.

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 Nevada Labor Commissioner, Nevada State Apprenticeship Council for approval.

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

The sponsor may modify the related instruction to meet local needs prior to submitting these Standards to Nevada Labor Commissioner, Nevada State Apprenticeship Council for approval.

Appendix A

WORK PROCESS SCHEDULE

The term of the occupation shall be defined by the attainment of all competencies, both technical and behavioral, of the position, which would be expected and approximated to occur within __8000__ hours of OJL, supplemented by a minimum of 144 hours of related instruction per year of apprenticeship.

Apprenticeship Competencies – Technical

| Item | Work Processes | Approx. Hours |
|----------|--|---------------|
| A | Safety Related | 1,000 |
| | Safety manual | |
| | Personal protective equipment | |
| | Installation of personal protective grounds (overhead and underground) | |
| | Pole climbing | |
| | Fire, hazard, confined space awareness | |
| | Emergency Action Plan (EAP) | |
| | First Aid/CPR/AED/BBP certification(s) | |
| | HAZCOM training | |
| B | Vehicle Operations | 840 |
| | CMV and Non-CMV Inspection | |
| | Coupling/uncoupling of combination units | |
| | Set up of heavy equipment (digger and large bucket trucks) | |
| | Operational (digging holes, hanging transformers, hauling/setting poles, etc.) | |
| | Digger derrick and pressure digger operation | |
| | DOT compliance | |
| C | Associated Tools | 350 |
| | Knowledge, care, and inspection of line tools (hot sticks, hoist, grips, rubber goods, line trucks, PPE, etc.) | |
| | Voltage detectors/meters | |
| | Compression tools | |
| | Slings | |
| D | Overhead Line Construction, Maintenance, and Repair | 2,400 |
| | Climbing Wooden Poles | |
| | Trouble shooting | |
| | Stringing conductor (wire) | |

| | | |
|---|---|--------------|
| | Hanging, change out, and banking of transformer(s) | |
| | Phase rotation | |
| | Fusing and fuse coordination | |
| | Repairing fallen conductor(s) | |
| | Right-of-way | |
| | Building taps | |
| | Under build and secondary | |
| E | Equipment Related | 1,200 |
| | Retiring, change out, and relocating lines and line equipment (pole, transformers, cutouts, etc.) | |
| | Training pertaining to services (connections, installing, and removing meters, etc.) | |
| | Training pertaining to working on energized systems (hot sticks, insulating rubber cover gear, rubber glove and rubber sleeve work) | |
| F | Underground/URD Construction, Maintenance, and Repair | 1,560 |
| | Proper installation of all underground lines and equipment (wire, transformer, etc.) | |
| | Troubleshooting primary and secondary issues | |
| | Installing, terminating, and splicing cable | |
| | Transformer change out and proper make-up | |
| | Cable identification | |
| | Training in underground location equipment training dealing with services (connections, installing, and removing meters, etc.) | |
| | Three phase equipment | |
| G | Substations | 650 |
| | Troubleshooting | |
| | Knowledge and operations of all substation equipment (fuses, breakers, regulators, metering, etc.) | |
| | Mobile substation | |
| | Use of equipment inside of substations | |
| | Care and maintenance of substations | |
| | Total hours (approximate) | 8000 |

The above on-the-job-learning (OJL) work process competencies are intended as a guide. It need not be followed in any sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make them fully competent and use good workmanship in all work processes, which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

Apprenticeship Competencies – Behavioral

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies, to complete the apprenticeship.

| Item # | Behavioral Competencies |
|--------|---|
| 1. | Participation in team discussions/meetings |
| 2. | Focus in team discussions/meetings |
| 3. | Focus during independent work |
| 4. | Openness to new ideas and change |
| 5. | Ability to deal with ambiguity by exploring, asking questions, etc. |
| 6. | Knows when to ask for help |
| 7. | Able to demonstrate effective group presentation skills |
| 8. | Able to demonstrate effective one-on-one communication skills |
| 9. | Maintains an acceptable attendance record |
| 10. | Reports to work on time |
| 11. | Completes assigned tasks on time |
| 12. | Uses appropriate language |
| 13. | Demonstrates respect for patients, co-workers, and supervisors |
| 14. | Demonstrates trust, honesty, and integrity |
| 15. | Requests and performs work assignments without prompting |
| 16. | Appropriately cares for personal dress, grooming and hygiene |
| 17. | Maintains a positive attitude |
| 18. | Cooperates with and assists co-workers |
| 19. | Follows instructions/directions |
| 20. | Able to work under supervision |
| 21. | Able to accept constructive feedback and criticism |
| 22. | Able to follow safety rules |
| 23. | Able to take care of equipment and workplace |
| 24. | Able to keep work area neat and clean |
| 25. | Able to meet supervisor's work standards |
| 26. | Able to not let personal life interfere with work |
| 27. | Adheres to work policies/rules/regulations |

RELATED INSTRUCTION OUTLINE

The related instruction has been developed in cooperation with employer-partners as part of the apprenticeship. The following is a set of courses to be delivered by subject matter experts.

Related Technical Instruction (RTI) - This instruction shall include, but not be limited to, at least 144 hours per year for each year of the apprenticeship. The related theoretical education listed below is tightly integrated with real work product. The curriculum is defined as a variety of classes, around which the exams and projects are based. By defining the RTI this way, all competencies required of the students are met, through project work.

COURSE TOPICS

HOURS

A. Year 1=

172

| | |
|--|----|
| Introduction of Transmission & Distribution System | 8 |
| Transmission | 8 |
| Distribution | 8 |
| Substation & Switchyards | 8 |
| Underground Residential Distribution System | 10 |
| Basic Electricity | 8 |
| A/C Fundamentals | 8 |
| Climbing Wooden Poles | 8 |
| Safety in T&D Maintenance | 8 |
| Using Tools | 8 |
| Safety in Underground Line Maintenance | 10 |
| Distribution Line Safety | 10 |
| Overhead Distribution Systems | 10 |
| Safety in Overhead Line Maintenance | 10 |
| Pole Framing and Guying | 10 |
| Setting and Replacing Poles | 8 |
| Rigging 1 | 8 |
| Rigging 2 | 8 |
| Electrical Safety | 8 |
| Hydraulic Derricks Digging Equipment | 8 |

B. Year 2 =

#182

| | |
|---------------|---|
| Bucket Trucks | 8 |
|---------------|---|

| | |
|---------------------------------------|----|
| Material Handling Bucket Trucks | 8 |
| Safe Bucket Truck Operations | 10 |
| Service Installations Parts 1 & 2 | 10 |
| Introductions to Metering | 8 |
| Safety in Meter Work | 8 |
| Bucket Truck Rescue | 8 |
| Working on Distribution Poles | 8 |
| Care & Testing of Tools and Equipment | 8 |
| Underground Cable Installation | 8 |
| Pad-mount Transformers & Switch Gear | 10 |
| Cable Splicing 1 | 8 |
| Cable Splicing 2 | 8 |
| Cable Terminations | 8 |
| URD Troubleshooting | 10 |
| Locating Primary Faults (URD) | 10 |
| Locating Secondary Faults (URD) | 8 |
| Multimeter Operations | 8 |
| Using Line Test Equipment | 8 |
| Transformer Connections 1 | 10 |
| Transformer Connections 2 | 10 |

C. Year 3 =

#146

| | |
|---|----|
| System Protection & Monitoring | 8 |
| Tree Trimming | 8 |
| Pole Top Equipment & Replacement (Transformers) | 10 |
| Pole Top Equipment & Replacement (Reclosers & Switches) | 10 |
| Pole Top Equipment & Replacement (Capacitors) | 10 |
| Pole Top Equipment & Replacement (Voltage Regulators) | 10 |
| Distribution Line Installation & Removal | 10 |
| Distribution Line Replacement | 10 |
| Distribution Line Repair (Gloves) | 10 |
| 34.5 kV Rubber Glove Work | 10 |
| Distribution Line Repair (Hot sticks) | 10 |
| Transformer Troubleshooting | 10 |
| Troubleshooting Overhead Lines | 10 |
| Overhead Troubleshooting 1 | 10 |
| Overhead Troubleshooting 2 | 10 |

D. Year 4 =

#194

| | |
|--|------------|
| Advanced Rigging | 8 |
| Safety in Substations & Switchyards | 8 |
| Control Equipment | 10 |
| Capacitors and Reactors | 8 |
| Voltage Regulators 1 | 10 |
| Voltage Regulators 2 | 10 |
| Power Transformers 1 | 10 |
| Power Transformers 2 | 10 |
| Circuit Breaker 1 | 10 |
| Circuit Breaker 2 | 10 |
| Relays 1 | 8 |
| Relays 2 | 8 |
| Power Quality | 10 |
| Transmission Line Safety | 10 |
| High Voltage Terminations | 8 |
| Transmission Structures | 8 |
| Climbing Steel Poles and Towers | 8 |
| Transmission Line Installation | 8 |
| Rigging For High Voltage Work | 8 |
| Working De-Energized Transmission Lines | 8 |
| Transmission Line Repair (Hot sticks) | 8 |
| Transmission Line Repair (Barehand Method) | 8 |
| Total Classroom Hours | 694 |

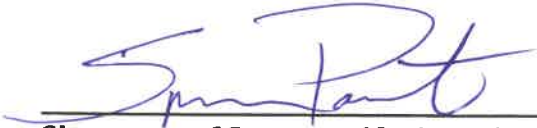
COURSE TOPIC DESCRIPTIONS

- A. Description #1 Introduction to the High Voltage Electrical System, Electrical Theory, Safety, Tools, Rigging and Digger derrick Trucks.
- B. Description #2 Operating Bucket Trucks, Learning about Electric Meters, Underground Electrical Tools and Methods and Transformer Connection Training for Single-Phase and Three-Phase Transformers.
- C. Description #3 Electrical System Operations, Distribution System and Equipment Maintenance and Troubleshooting.
- D. Description #4 Substation Equipment Operations, Transmission Lines, Equipment and Energized Maintenance.

SECTION 27 - OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS

Pole Line Contractors, Inc., hereby adopts these standards of apprenticeship.

Sponsor(s) designate the appropriate person(s) to sign the standards on their behalf.



Signature of Sponsor (designee)

Date: 1/18/2023

Spencer Porter / President

Type Name & Title