



STATE OF ALASKA

COMPETENCY SPECIFICATION

Occupational Group: LABOR TRADES, AND CRAFTS

CAREER AREA: **MAINTENANCE GENERALIST** 9311

9311-58

9311-56

9311-54

9311-53

9311-52

Definition: Occupations involving the repair and maintenance of exterior and interior buildings, building component and system devices, structures; the care and maintenance of plants and grounds; the preventive maintenance and servicing of equipment; and the related manual physical work.

The work requires a range of competencies in a variety of trades such as plumbing, electrical, painting, masonry, concrete, carpentry, grounds maintenance and gardening. The work is of a broad range and general nature, and typically is not at the skill level characteristic of the licensed crafts of electrician and plumber.

The work typically is involved in dealing with sub-components of complete systems. The exception is with Heating, Ventilation Air Conditioning Controls (HVAC) applicable to buildings. Maintenance Generalists perform HVAC component replacement (e.g. filters and fluid) and minor repair (e.g. thermostat or fan replacement). By contrast, Maintenance Specialists perform HVAC tasks in a much broader capacity, including design, installation and repair of components and whole systems.

Levels:

Competencies are the required knowledge, skills, abilities and work behavior demonstrated and required for the on-going essential functions of the job. Possession of competencies alone *will not* automatically advance an incumbent; rather, the incumbent must demonstrate and use the competency in the on-going performance of *assigned* duties.

SUB JOURNEY ENTRY/TRAINEE: Worker is under close supervision and review. The work is designed to provide orientation, training and familiarization with the processes of the occupational field; reinforces and supplements previous experience and education; and allows the trainee to carry out progressively more difficult and responsible tasks.

9311-58 **I** This is the entry or basic level requiring little if any prior work experience or training or specialized skills. The work is characterized by routine and repetitive tasks that are well defined, directly related and follow prescribed steps, methods and procedures and frequently requires strenuous physical ability and effort.

SUB-JOURNEY: Worker provides assistance to others by performing the more routine, non-specialized and repetitive tasks that do not require the more specialized skills. Basic tasks are performed independently and those of progressive difficulty are performed under direct supervision until proficiency is demonstrated.. The designation of Sub-journey does not infer that the work must be always in the company of another and/or higher level employee.

9311-56 **II** This level requires the application and demonstration of those knowledges and skills related to the materials and techniques of building maintenance and component sub-systems, and routine and preventive maintenance of mechanical, electrical and related systems. Work may be concentrated on one-well developed area performed under less close supervision, or a range of semi-skilled duties in one or more skilled trades.

JOURNEY: Worker is fully proficient. Work is performed independently, using standard methods and techniques, and consists of assignments that are typical of the occupational field. Journey workers can use a variety of interrelated skills to independently complete work that conforms to industry standards. The work may require proof of competence, training or certification.

9311-54 This is the fully proficient level characterized by the independent performance of duties involving interrelated processes and steps and considerable physical ability and effort. Assignments require application of prior training or experience or both, in a variety of trade and craft occupations.

Lead: Worker performs the work and leads a group of other workers as defined by the collective bargaining unit contract, by directing and reviewing tasks. Lead worker assigns work; sets schedules and priorities; determines methods; provides training and instruction; evaluates and approves completed tasks.

9311-53 This level performs the work and leads a shift or group of journey workers by training, directing and reviewing tasks.

FOREMAN: Worker who acts as an intermediary between workers and management to organize, assign and directly supervise the work of a labor, trades and crafts occupational group. The worker is accountable for the quality and quantity of the work accomplished.

9311-52.

Essential Core Competencies: “Common or typical” to the career area and required for all levels as appropriate to the specific position. *These are included in the position description and performance evaluation review process.*

Maintenance Generalist **core**

Knowledge of

- basic mathematics
- the safe and proper use and care of tools common to equipment and building maintenance

Ability to

- locate and use shop and manufacturer's reference books and manuals
- perform limited construction and maintenance repairs using appropriate tools
- perform minor maintenance and repair on hand and power tools and equipment used in the work
- perform physically demanding work
- read and write; follow and apply written and oral directions and safety sheets
- complete written reports, e.g., time sheets, incident reports, material requests
- learn and safely handle construction, maintenance wastes and hazardous materials
- respond to emergency situations following established procedures

Skill in

- the use and operation of hand and powered tools, equipment, or machines of varying difficulty

Essential Technical Competencies: *in addition to the Core Competencies.*

These are included in the position description and performance evaluation review process.

SUB-JOURNEY level workers will be required to meet the following

TO:

- have the aptitude to develop, practice and use needed skills and work behaviors
- apply verbal and written instructions to individual and grouped tasks
- perform routine tasks with consistent results
- recognize situations requiring additional supervision or instruction in order to request assistance
- apply acquired skills, knowledge and abilities to new tasks
- learn proper usage and care of tools and equipment of the trade or craft

Maintenance Generalist Sub-journey I 9311-58
in addition

Knowledge of and ability to

- perform basic tasks involved in the upkeep of grounds, plant, exterior structures, buildings, and related fixtures and utilities
- demonstrate basic understanding of blueprints and schematic drawings

EXAMPLES OF DUTIES:

Assists other workers with assembling and carrying materials and equipment.

Undertakes basic work projects such as digging trenches, demolition of walls and removal of debris.

Mows, irrigates and fertilizes lawns and fields.

Plows snow and spreads sand.

Sands, scrapes and cleans area prior to painting or finishing.

Maintenance Generalist Sub-journey II 9311-56
in addition

Knowledge of:

- work practices, methods and processes related to the building and maintenance trades
- work standards, care or equipment and area safety practices

Ability to:

- layout simple projects or fabrications
- follow documented instructions/ guidelines from codes
- perform accurate calculations for estimating costs
- develop knowledge of sustainable practices in routine maintenance and system operations
- recognize and perform “in kind” replacement of basic components

JOURNEY level workers will be required to meet the following

TO:

- have the required skills to handle difficult problems encountered
- have comprehensive knowledge of the subject or occupational area
- use judgment in determining actions
- exercise independence in determining actions
- plan and lay out work (i.e. determine how to do one’s own work)
- make appropriate choice among alternatives
- complete work with only limited instruction and/or little or no advice
- proceed with work without having results or products generally reviewed in progress

Maintenance Generalist Journey 9311- 54
in addition

Knowledge of and ability to

- apply standard woodworking techniques and shop mathematics
- perform fundamental electrical and plumbing maintenance and repairs
- perform fundamental repairs and maintenance of boilers/furnaces and heating/air conditioning systems
- utilize basic procurement procedures and warranty provisions
- use computer applications in the course of the work

Ability to

- perform visual examinations and operational tests to determine the need for, and the performance of, repair work
- work from sketches, work orders, basic blueprints and instructions
- demonstrate proficiency in use of a variety of tools
- make minor modifications in assignments as situations occur
- recognize and respond quickly to dangerous situations or emergencies using emergency response equipment

BUILDINGS

Knowledge of and ability to perform

- the installation, repair and maintenance of and related devices, fixtures and utilities

Knowledge of and ability to install, repair and maintain

- exterior and interior structures, systems, facilities and related fixtures and utilities
- boilers/furnaces, heating/air conditioning systems and controls
- power generation systems and physical plant
- sprinkler, alarm and security systems
- computer systems, networks and related devices

Knowledge of computer building control systems (Direct Digital Control)

Knowledge of the performance of

- skilled work in cleaning, finishing and painting of interior and exterior surfaces; including methods, techniques, devices, and materials that are best suited to the surface finish required

Knowledge of the

- operation, maintenance and repair of boilers/furnaces, air compressors and pressure vessels
- maintenance of plumbing subsystems and equipment

Knowledge may include

- woodworking techniques and advanced shop mathematics to plan, and lay out complex and exact projects with features such as arcs, tangents, and circles
- carpentry to complete total structure work rather than only a segment or specialized part of a structure

Ability to

- make changes and adjustments, i.e. to keep heating equipment operating safely and efficiently
- fabricate and design, such as wood and metal modifications for a variety of structures or mechanical, plumbing, environmental systems and equipment repairs
- service pneumatic controls

EXAMPLES OF DUTIES:

Repairs cracked or broken tiles, wallboard or other finishes

Repairs system components such as pumps, motors, valves, etc.

Repairs basic low voltage system and electric appliances.

Constructs, alters, renovates and repairs buildings, sheds, scaffolds, partitions, forms, and other structures from blueprints, plans or sketches.

Uses air brushes and/or electro-static flow methods. Uses epoxy and poly-resin products; matches texture, color to items or areas to be refinished or refurbished.

GROUNDS

Knowledge of and the ability to

- mix and properly use solvents, gas, fertilizers, fungicides, herbicides and pesticides
- grow, transplant, prune and maintain a variety of plants
- propagate and tend nursery stock common to greenhouse operations
- apply techniques of efficient/effective landscape designs, plant species, growing zones and season, soil requirements, and growth habits
- design and install irrigation and water management systems for landscaped areas
- detect and identify needed treatment of plant disease/pests
- take soil sample and determine proper pH and other nutrients necessary for growing and maintaining a variety of plants
- plan and design garden beds and planting schedules

EXAMPLES OF DUTIES:

Trims, prunes trees and shrubs. Applies pesticides and fertilizers.

Weeds to maintain selected growth.

Builds hot beds, fences, shelves. Provides for pedestrian control and elimination of pests.

Applies erosion control methods.

LEAD worker will be required

TO:

- assign, monitor, train and evaluate daily tasks
- make decisions and set and balance priorities
- coordinate tasks of others and work efficiently
- ensure adherence to work schedules, quality standards, safety and security rules
- give clear instructions
- recommend appropriate solutions to difficult situations
- motivate others

Maintenance Generalist Lead 9311-53
in addition

Ability to

- maintain inventory of tools, equipment and supplies
- recommend alternative solutions to problems encountered in the work

Skill in

- organizing assignments in logical order

EXAMPLES OF DUTIES:

Responds to questions about tools, methods and resources.

Sets schedules and assigns daily tasks to others.

Ensures adequate inventory of equipment, tools and supplies.

Assists in determining need for training and in organizing and giving training.

FOREMAN in addition will be required

TO:

- apply knowledge of individual and team behavior to the workplace
- display knowledge of supervisory principals and methods in dealing with employees
- utilize knowledge of best practices to maximize staff potential
- plan and manage resources to meet quality and quantity goals
- coach, mentor and counsel staff to meet competencies
- formulate training plans
- create and maintain an atmosphere of teamwork
- manage staff and resolve conflicts
- organize, set priorities, assign, evaluate and direct work of staff and/or contractors
- prepare and maintain records, correspondence and reports
- ensure safe work environment
- display skill in problem solving

Maintenance Generalist Foreman 9311-52

in addition

Knowledge of

- state procurement procedures for materials and services contracts

Ability to

- think conceptually to envision the process and end product
- anticipate consequences
- plan and place timely orders for materials
- apply skill in problem solving/creativity
- understand clients/organizational culture and environment
- negotiate costs and materials with vendors
- establish work standards and procedures
- direct work on cross-functional teams
- assist with the development of budgets, work plans, cost estimates, delivery schedules and other administrative support functions
- relay current changes in standards and practices of the industry effectively

EXAMPLES OF DUTIES:

Plans and schedules work of multi-member crews

Formulates and ensures compliance with maintenance, repair and construction project standards.

Sets schedules and priorities for maintenance, repair and construction projects.

Directs projects.

Prepares cost, material and manpower estimates within budget, travel, equipment and delivery considerations.

Certifications, Licenses or Training: *as indicated*

- Alaska Drivers License
- Commercial Drivers License
Endorsements: _____
- Criminal background check
- Current CPR Certificate
- Current First Aid Certificate
- Fire Alarm System Certificate
- 40 hours of Hazardous Work Operator training
- Mandt training
- Possession of a security clearance by State or federal agencies
- Other

RECOGNITION EQUIVALENT TO, OR CERTIFICATE OF FITNESS AS

- Boiler Operator
- Carpenter
- Painter
- Other

ADDED VALUE COMPETENCIES AND CERTIFICATION :

BASIC:

- Cement
- Hardware
- Rough Carpentry
- Water Base Paint
- Asbestos Worker Certificate
- Interagency Qualification System red card
- Incident Command system (ICS) red card

MODERATE:

- Masonry with tile, ceramics and stone
- Finishes
- Universal Refrigeration Certificate
- Finish carpenter
- Boiler (Hot Water)
- Appliance repair
- Oil Base Paint with respirator

HIGH:

- Boiler (Steam)
- Digital controls
- Electrical
- Plumbing
- Mechanical
- Electronics and controls

HIGHEST:

- Heating, Ventilation & Air Conditioning Certificate (HVAC)

Special, Environmental or Hazardous Working Conditions and Physical Requirements

BUILDING OCCUPANCY VALUE CATEGORY

- BASIC:** Class B and below
 - two-car garage
 - storage and warehouse

- MODERATE:** Class A office building

- HIGH:** 24-hour operation
high volume use
live-saving issues on premises
number and complexity of systems where the physical plant is integral to the program, i.e.
 - correctional centers
 - crime laboratories
 - health laboratories
 - hospitals
 - other

- Understanding of and willingness to work or interact with the resident population of a
 - State correctional facility
 - psychiatric hospital
 - Pioneers' Home
 - other

Exposure to work with manual or portable power tools for extended periods in uncomfortable positions

- | frequent | continuous | |
|--------------------------|--------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | standing and walking |
| <input type="checkbox"/> | <input type="checkbox"/> | bending, |
| <input type="checkbox"/> | <input type="checkbox"/> | kneeling, stooping |
| <input type="checkbox"/> | <input type="checkbox"/> | twisting, crawling |
| <input type="checkbox"/> | <input type="checkbox"/> | reaching |
| <input type="checkbox"/> | <input type="checkbox"/> | pulling, pushing |
| <input type="checkbox"/> | <input type="checkbox"/> | gripping and repetitive motion of hands and arms |
| <input type="checkbox"/> | <input type="checkbox"/> | climbing ladders, scaffolding, and rooftops |
| <input type="checkbox"/> | <input type="checkbox"/> | work in confined, dusty, and dirty areas with noxious smells and fumes |

- Exposure to
- high noise and congested areas
 - all weather conditions

- insect bites and stings
- possibility of cuts, bruises, and contusions
- high pressure steam, high voltage, electrical shock
- travel by small planes, helicopters, boats
- active aircraft runway areas
- hazardous chemicals hazards, lasers and radiation
- work at heights over 25 feet above ground
- lifting and moving objects up to 50 pounds, unassisted, and over 50 pounds with assistance

Equipment:

- blueprints, plans, schematics and specifications
- forklifts
- trucks (light, pick-up, flatbed, dump)
- two-way radio
- underground locating equipment
- variety of computerized or electrical testing equipment
- variety of general and specialized hand and power tools and equipment
- variety of snow and ice removal tools and equipment
- welders, cutting torch, soldering & brazing tools

BUILDINGS

- compressors, generators
- potable water systems
- respirators and safety equipment and gear
- scaffolding, extension ladders
- sweeper

GROUNDS

- asphalt kettle
- backhoe
- boom truck
- chain saw
- caterpillar
- garden tools
- grader
- ground compactor, jack hammer
- hand and riding mower
- light seed cleaning equipment
- loaders
- rototiller
- spreader

Occupational Group: LABOR, TRADES AND CRAFTS
CAREER AREA: *Maintenance Generalist*

9311

tractors

OTHER:

Orig: LTC Study 07/01/99 (JKE)

Previous history: P9334-54; P9335-55; P9383-53; P9384-54; P 9397-57; P9398-58
P9538-58; P9547-57; P9566-56

ADDENDA

GUIDE IN THE RANKING OF TOOLS AND EQUIPMENT

BASIC

Acetylene welding
Bench drill press
Hand tools

MEDIUM

Lathe (metal higher than wood)
Milling tools
Stick welding

HIGH

Boom truck
D-8 caterpillar
Grader
potable water systems
TIG welding