GENERAL SERVICES ADMINISTRATION
FEDERAL SUPPLY SERVICE
AUTHORIZED FEDERAL SUPPLY SCHEDULE PRICE LIST
AS OF 03/05/2014

Online access to contract ordering information, terms, and conditions, up-to-date pricing and the option to create an electronic delivery system are available through GSA Advantage!, a menu-driven database system. The Internet address for GSA Advantage! is: http://www.gsaadvantage.gov.

General Services Administration
Federal Supply Service
Facilities Maintenance and Management Contract

CONTRACT NUMBER:
GS-21F-0051V

For more information on ordering from Federal Supply Schedules, click on the FSS Schedules button at http://www.fss.gsa.gov.

CONTRACT PERIOD:
March 5, 2014 through March 4, 2019

HGS Engineering, Inc.
1121 Noble Street
Anniston, AL 36201
P (256) 236 1848
F (256) 236 2979
www.hgsengineeringinc.com

DUNS: 03-554-0637

BUSINESS SIZE: Small, Service-Disabled, Veteran Owned

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I. Company Overview: HGS Engineering, Inc.

HGS Engineering, Inc. is a Service-Disabled, Veteran-Owned Small Business (SDVOSB), proudly providing comprehensive Environmental Services to both the Federal Government and private industry since 1998. As a cost-effective and responsive firm, HGS Engineering, Inc. has built a company around repeat business from satisfied clients.

Based in Anniston, AL, HGS Engineering has grown from one office and five employees in 1998 to six offices and over 45 employees in 2008. Over the past decade, our areas of operation have expanded from **Environmental Services** and now include **Construction Management, Facilities Management, Chemical Weapon Destruction Oversight, Emergency Management, Administrative/Technical Support, Engineering, and Data Management**. HGS currently provides these wide-ranging services to local governments, various components of the Department of Defense, the Department of Homeland Security, and to private sector clients in a number of industries.

Examples of successful HGS tasks include **Hazardous Materials Management** for Shaw Air Force Base in South Carolina, **Data Management** for the U.S. Army Corps of Engineers, **Hazard Identification** for the U.S. Department of Veteran Affairs, and **Defense Re-use and Marketing Service** for the U.S. Bureau of Indian Affairs.

Environmental Services

HGS Engineering's core competency is in the field of Environmental Engineering, and the company currently gives environmental support to both the Federal Government and the Private Sector. We are staffed with credentialed professionals who have been trained to address air, water, and solid/hazardous waste issues in an industrial context. Our environmental professionals have a thorough understanding of relevant industrial and chemical processes, and appreciate both the scope and application of environmental regulations.

Additionally, HGS has conducted Solid and Hazardous Waste Determinations and has assisted its customers with the proper management and cost-effective disposal of hazardous waste streams. We frequently carry out **RCRA Compliance Assessments** of facilities to assist our clients with both environmental and safety concerns.

Facilities Management

HGS provides Commercial Facilities Maintenance (CFM) for a seven story, 450,000 square-feet building on a 17 acre campus for an Internal Revenue Service building under the General Services Administration (GSA) management. HGS provides total facility support from kitchen equipment maintenance, boiler and chiller maintenance, HVAC management, electrical systems, plumbing, janitorial services, and grounds maintenance of improved and unimproved surfaces.

Figure 1. HGS Personnel perform Facility Maintenance at the IRS Center, Chamblee, GA.

Social Security Administration Building
Marietta, Georgia

Alcohol, Tobacco and Firearm Center
Marietta, Georgia

HGS Engineering, Inc. provides **Facility Maintenance and Management** services to the Social Security Administration Building and the Alcohol, Tobacco and Firearm Center, both in Marietta, Georgia. Services provided include janitorial, solid waste removal, pest control, ground care, HVAC maintenance, fire alarm maintenance, and emergency response service for any problems.

For a detailed list of services provided by HGS Engineering, Inc., please see Attachment A, located on Page 9. Services offered by HGS Engineering, Inc. include but are not limited to those found in Attachment A.

Corporate Statement

We at HGS Engineering, Inc. appreciate the opportunity to provide this GSA Catalog to Federal Customers seeking the very best in Facility Maintenance and Management Services, Schedule 03FAC.

HGS will always provide responsive, accurate, and cost-effective service for our clients. Maintaining a strong, positive relationship with our clients, one built on mutual trust, is our goal.

Thank you and I look forward to working with you.

Sincerely,

Harry G. Summers, III, Professional Engineer
President/CEO
HGS Engineering, Inc
harry@hgsengineeringinc.com

II. Customer Information: HGS Engineering, Inc.

SCHEDULE TITLE: FACILITY MAINTENANCE AND MANAGEMENT SERVICES

FSC GROUP: 03FAC

CONTRACT NUMBER: GS-21F-0051V

CONTRACT PERIOD: MARCH 5, 20014 THROUGH MARCH 4, 2019

CONTACT INFORMATION: **HGS ENGINEERING, INC**
1121 NOBLE STREET
ANNISTON, AL 36201
P (256) 236-1848 / **F** (256) 236- 2979
www.hgsengineeringinc.com

POINT OF CONTACT: HARRY G. SUMMERS, III, P.E., PRESIDENT / CEO
harry@hgsengineeringinc.com

CONTRACT ADMINISTRATOR: JILL WROBEL., VICE PRESIDENT OF FINANCE
jill@hgsengineeringinc.com

BUSINESS SIZE: SMALL, SERVICE-DISABLED VETERAN OWNED

1a. Table of awarded special item number(s) with appropriate cross-reference to item descriptions and awarded price(s).

SIN 003 97,	**Ancillary Repair and Alterations**
SIN 003 100	**Ancillary Supplies and/or Services, relating to Facilities Maintenance & Management Solutions for Real Property, Dockside Facilities Maintenance, Repair Services and Dry Docking Solutions and Industrial, Aerospace and Marine Coating Solutions**
SIN 371 001,	**Grounds Maintenance**
SIN 811 002,	**Complete Facilities Maintenance**
SIN 811 003,	**Complete Facilities Management**
SIN 811 004,	**Electrical, and all Utility Services limited to Facility Maintenance**
SIN 811 005,	**Refrigeration, Heating, Ventilation, Air Conditioner, Boiler and Chiller HVAC Maintenance**
SIN 811 006,	**Facilities Maintenance and Management Consulting**
SIN 871 100	**Ancillary Supplies and/or Services, relating to Energy Management, Water Conservation and Support Services**
SIN 871 206,	**Building Commissioning Services**

SEE ATTACHMENT A FOR SERVICES LISTED PER SIN

1b. Identification of the lowest priced model number and lowest unit price for that model for each special item number awarded in the contract. This price is the Government price based on a unit of one, exclusive of any quantity/dollar value, prompt payment, or any other concession affecting price. Those contracts that have unit prices based on geographic location of the customer, should show the range of the lowest price, and cite the areas to which the prices apply:
NOT APPLICABLE

1c. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles, experience, functional responsibilities, and education for those types of employees or subcontractors who will perform services shall be provided.
SEE ATTACHEMENT B FOR LABOR CATEGORY DESCRIPTIONS
SEE ATTACHMENT C FOR A LIST OF HOURLY RATES

2. Maximum order:

$1,000,000.00

3. Minimum order:

$100.00

4. Geographic coverage (delivery area):

DOMESTIC (48 contiguous states and Washington, DC)

5. Point(s) of production (city, county, and State or foreign country):

HGS Engineering, Inc.
1121 Noble Street
Anniston, AL 36201

6. Discount from list prices or statement of net price:

NOT APPLICABLE

7. Quantity discounts:

2.00% on orders above $100,000.^{00}

8. Prompt payment terms:

½ % - 20 days; NET 30

9a. Notification that Government purchase cards are accepted at or below the micro-purchase threshold:

YES

9b. Notification that Government purchase cards are accepted or not accepted above the micro-purchase threshold:

NO

10. Foreign items (list items by country of origin):

NONE

11a. Time of delivery: (Contractor insert number of days.)

30 – 45 days ARO

11b. Expedited Delivery:

30 – 45 days ARO

11c. Overnight and 2nd Day Delivery:

CONTACT CONTRACTOR

11d. Urgent Requirements:

CONTACT CONTRACTOR

12. F.O.B. Points

DOMESTIC ONLY, WITH THE EXACT DELIVERY TIME TO BE SPECIFIED

13a. Ordering Address:

HGS Engineering, Inc.
1121 Noble Street
Anniston, AL 36201

13b. Ordering Procedures:

For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's), and a sample BPA can be found at the GSA/FSS Schedule homepage (fss.gsa.gov/schedules).

14. Payment Address:

HGS Engineering, Inc.
1121 Noble Street
Anniston, AL 36201

15. Warranty Provision:

NOT APPLICABLE

16. Export Packing Charges, if applicable:

NOT APPLICABLE

17. Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level.)

CONTACT CONTRACTOR

18. Terms and conditions of rental, maintenance, and repair (if applicable).

NOT APPLICABLE

19. Terms and conditions of installation (if applicable).

NOT APPLICABLE

20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from price lists (if applicable).

NOT APPLICABLE

20a. Terms and conditions for any other services (if applicable):

NOT APPLICABLE

21. List of service and distribution points (if applicable).

NOT APPLICABLE

22. List of participating dealers (if applicable).

NONE

23. Preventative maintenance (if applicable).

NOT APPLICABLE

24a. Special attributes such as environmental attributes (e.g. recycled content, energy efficiency, and/or reduced pollutants).

NOT APPLICABLE

24b. If applicable, indicate that Section 508 compliance information is available on Electronic and Information (EIT) supplies and services and show where full details can be found (e.g. contractor's website or other location.) The EIT standards can be found at www.Section508.gov/.

NOT APPLICABLE

25. Data Universal Number System (DUNS) Number:

03-5540637

26. Notification regarding registration in Sam.gov database.

REGISTERED. CAGE CODE #1HJH9

III. Attachment A: Specific Services Offered Per SIN

HGS Engineering, Inc. can provide comprehensive Facility Maintenance and Management Services including (but not limited to) those listed below:

SIN 003 97, Ancillary Repair and Alterations

- Routine Painting or Carpeting
- Simple Hanging of Drywall
- Basic Electrical or Plumbing Work
- Landscaping
- Similar Noncomplex Services

SIN 003 100, Ancillary Supplies and/or Services, relating to Facilities Maintenance & Management Solutions for Real Property, Dockside Facilities Maintenance, Repair Services and Dry Docking Solutions and Industrial, Aerospace and Marine Coating Solutions

- Ancillary supplies and/or services are support supplies and/or services which are not within the scope of any other SIN on this schedule
- The work performed under this SIN shall be associated with existing SIN (s) that are a part of this schedule

SIN 371 001, Grounds Maintenance

- Mowing
- Planting
- Seeding
- Fertilizing
- Raking
- Mulching
- Watering
- Pruning
- Weeding
- Aerating

SIN 811 002, Complete Facilities Maintenance

- Pest Control Services
- Grounds Maintenance, Landscaping, Tree Trimming, and Snow Removal
- Elevator Inspection and Maintenance Services
- Fire Alarm System Preventive Maintenance and Repair Services and Fire Suppression System Preventive Maintenance and Repair Services
- Locksmith Services
- Janitorial/Custodial Services and Collection and Disposal of Refuse
- Roofing Repair (excluding complete roof replacement)
- Plumbing and Pipefitting
- Electrical (including high/low voltage systems and utility service, and maintenance and repair of exterior electrical distribution system)
- Energy Management Control Services (EMCS), Energy Planning, Energy Analysis and Energy Audit Services
- Paving (as it relates to maintenance and repair of surface areas)

- Telephone Maintenance
- Support Training and Consulting Services
- Cemetery Maintenance
- Operation and Maintenance of Water Distribution System and Maintenance of the Septic Field
- All Mechanical, Operations, Maintenance and Repair of Building Systems, and Heating/Ventilation/Air Conditioning (HVAC) Maintenance
- Maintenance of Facilities and Systems (including instruments, carpentry, masonry, and refrigeration services)

SIN 811 003, Complete Facilities Management

- Property and Facilities Management
- Planning
- Scheduling
- Quality Control Software Support Services
- Computer and/or Facilities Management Systems

SIN 811 004, Electrical, and All Utility Services Limited to Facility Maintenance

- Electrical Services:
  - Maintenance of High/Low Voltage Systems
  - Maintenance and Repair of Exterior Electrical Distribution System
- Utility Service Systems:
  - Electrical
  - Telephone
  - Gas and Water Utility Service
  - Drinking Water and Waste Water Services

SIN 811 005, Refrigeration, Heating, Ventilation, Air Conditioner, Boiler and Chiller HVAC Maintenance

- Refrigeration
- Heating
- Ventilation
- Air Conditioner
- Boilers
- Chillers

SIN 811 006, Facilities Maintenance and Management Consulting

- Development and Planning
- Facilitation and Coordination
- Documentation and Program Planning
- Audits and Inspections
- Evaluations, Studies, Analyses (including cost), Scenarios, Reports
- Policy and Regulation Development Assistance

SIN 871 100, Ancillary Supplies and/or Services, relating to Energy Management, Water Conservation and Support Services

- Ancillary supplies and/or services are support supplies and/or services which are not within the scope of any other SIN on this schedule

- The work performed under this SIN shall be associated with existing SIN (s) that are a part of this schedule

SIN 871 206, Building Commissioning Services

- Comprehensive Building Commissioning Services on:
  - New Construction
  - Major Modernization
  - Existing Energy Consuming Operations (Recommissioning)
- Ensure Designed Building Systems Operate Efficiently
- Retro-Commissioning Services
- Energy Efficient Buildings Certification Programs, such as LEED, available

III. Attachment B: Labor Category Descriptions

HGS Engineering, Inc. can supply the following labor categories for each Special Item Number (SIN). For the corresponding list of Hourly Rates, please see Attachment C.

Manager Positions	
Position: Manager, Project	**Minimum Years of Experience:** 10
Responsibilities: Responsible for overall management and performance of the project. Single point of contact with the Government for all contract issues. Full authority to act in the administration of the contract. Establishes policies consistent with tenant, customer, and corporate objectives. Establishes short- and long-range objectives for the project. Ensures good stewardship of all facilities, equipment, and environmental resources associated with the project.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Twenty years experience on project of similar scope and size
Position: Manager, Assistant Project	**Minimum Years of Experience:** 7
Responsibilities: Responsible for daily management and performance of the project. Alternate point of contact with the Government for all contract issues. Enforces policies consistent with tenant, customer, and corporate objectives. Meets short- and long-range objectives for the project. Ensures good stewardship of all facilities, equipment, and environmental resources associated with the project.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Fourteen years experience on project of similar scope and size
Position: Manager, Business	**Minimum Years of Experience:** 5
Responsibilities: Manages the organization's business process including budgets and cost reporting. Consolidation and distribution of budgets and related reports. Develops and administers cost policy and procedures. Reviews analysis of operating results, develops reports, and provides recommendations to management.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Ten years experience on project of similar scope and size
Position: Manager, Environmental	**Minimum Years of Experience:** 5
Responsibilities: Evaluates operations to determine compliance with federal, state, or local statutes as well as environmental regulations. Performs inspections, assesses hazards, and recommends necessary alterations to management.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Ten years experience on project of similar scope and size
Position: Manager, Quality	**Minimum Years of Experience:** 5
Responsibilities: Directs quality assurance program and ensures quality problems are identified and resolved. Evaluates systems, analyzes data, evaluates services and technology and establishes quality control procedures. Oversees inspections and audits. Investigates product quality problems and recommends changes or improvements. Maintains proper documentation and reports.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Ten years experience on project of similar scope and size
Position: Manager, Safety	**Minimum Years of Experience:** 5
Responsibilities: Directs organization's safety programs to protect employees and the company against harm, and maintain safe working conditions. Formulates and suggest work safety standards, and enforces procedures. Risk prevention areas include hazardous materials exposure, accidents, fires, or other unsafe conditions. Meets compliance and reporting requirements of federal or state regulations. Advises management on problem correction.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Ten years experience on project of similar scope and size
Position: Manager, Training	**Minimum Years of Experience:** 5

Responsibilities: Assesses staff training requirements and creates programs to meet needs. Plans and administers training seminars such as technical skills or employee relations issues. Managing conflict resolution, team building, or employee skill evaluations might be included in responsibilities. Assesses effectiveness of training.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Ten years experience on project of similar scope and size
Position: Manager, Work Control	**Minimum Years of Experience:** 5
Responsibilities: Establishes procedure to Receive, record, and distribute work orders to service crews upon customers' requests. Oversees preparation of work order and distribution to service crew. Schedules service call and dispatches service crew. Calls or writes customer to insure satisfactory performance of service. Reviews record of service calls and work orders. May dispatch orders and relay messages and special instructions to mobile crews and other departments, using radio telephone equipment.	**Minimum Educational/Degree Requirements:** Bachelors degree in related field **Training or Certification Requirements:** None **Substitution for Education:** Ten years experience on project of similar scope and size
Supervisor Positions	
Position: Supervisor, Facilities	**Minimum Years of Experience:** 5
Responsibilities: Provides work direction and supervision for labor categories involved in maintenance and repair work of facilities. Reviews over work requests to decide problem and resolution, and delegates assignments. Monitors work completed by outside contractors.	**Minimum Educational/Degree Requirements:** Associates degree in related field **Training or Certification Requirements:** As may be required by local, state, or federal regulations **Substitution for Education:** Ten years experience in similar position
Position: Supervisor, Grounds	**Minimum Years of Experience:** 5
Responsibilities: Provides work direction and supervision for labor categories involved in maintenance and repair work of facility grounds. Reviews over work requests to decide problem and resolution, and delegates assignments. Monitors work completed by outside contractors.	**Minimum Educational/Degree Requirements:** Associates degree in related field **Training or Certification Requirements:** As may be required by local, state, or federal regulations **Substitution for Education:** Ten years experience in similar position
Position: Supervisor, Maintenance	**Minimum Years of Experience:** 5
Responsibilities: Provides work direction and supervision for labor categories involved in maintenance and repair work of facility equipment. Reviews over work requests to decide problem and resolution, and delegates assignments. Monitors work completed by outside contractors.	**Minimum Educational/Degree Requirements:** Associates degree in related field **Training or Certification Requirements:** As may be required by local, state, or federal regulations **Substitution for Education:** Ten years experience in similar position
Position: Supervisor, Plant Operations	**Minimum Years of Experience:** 5
Responsibilities: Provides work direction and supervision for labor categories involved in maintenance and repair work of facility utility plants. Reviews over work requests to decide problem and resolution, and delegates assignments. Monitors work completed by outside contractors.	**Minimum Educational/Degree Requirements:** Associates degree in related field **Training or Certification Requirements:** As may be required by local, state, or federal regulations **Substitution for Education:** Ten years experience in similar position
Position: Supervisor, Structures	**Minimum Years of Experience:** 5
Responsibilities: Provides work direction and supervision for labor	**Minimum Educational/Degree Requirements:**

categories involved in maintenance and repair work of physical structures. Reviews over work requests to decide problem and resolution, and delegates assignments. Monitors work completed by outside contractors.	Associates degree in related field **Training or Certification Requirements:** As may be required by local, state, or federal regulations **Substitution for Education:** Ten years experience in similar position
Position: Supervisor, Support	**Minimum Years of Experience:** 5
Responsibilities: Provides work direction and supervision for labor categories involved in providing support maintenance and repair work of facilities operations and maintenance. Reviews over work requests to decide problem and resolution, and delegates assignments. Monitors work completed by outside contractors.	**Minimum Educational/Degree Requirements:** Associates degree in related field **Training or Certification Requirements:** As may be required by local, state, or federal regulations **Substitution for Education:** Ten years experience in similar position
Position: Supervisor, Utilities	**Minimum Years of Experience:** 5
Responsibilities: Provides work direction and supervision for labor categories involved in maintenance and repair work of utilities. Reviews over work requests to decide problem and resolution, and delegates assignments. Monitors work completed by outside contractors.	**Minimum Educational/Degree Requirements:** Associates degree in related field **Training or Certification Requirements:** As may be required by local, state, or federal regulations **Substitution for Education:** Ten years experience in similar position
Lead Positions	
Position: Lead Automotive Worker	**Minimum Years of Experience:** 4
Responsibilities: Performs a variety of minor repairs and services to maintain motor vehicles. Places and maintains decals on vehicles. Checks and replaces batteries. Rotates, repairs, and replaces tires. Washes, polishes, and cleans interiors and exteriors of vehicles. Drains, flushes, and replaces engine, transmission, and differential grease and oils. Checks, cleans, calibrates, and replaces spark plugs. Cleans and replaces oil and air filters. Adjusts brakes, replaces windshield wipers, and similar minor parts. Assists on major overhaul jobs by disassembling and cleaning parts, repairing components such as generators and water pumps, and replacing thermostats, points, electrical wiring and other items. Maintains tools and equipment, and cleans work areas. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Boiler Tender	**Minimum Years of Experience:** 4
Responsibilities: Tends one or more boilers to produce steam or high-temperature water for use in an establishment. Fires boiler. Observes and interprets readings on gauges, meters, and charts which register various aspects of boiler operation. Adjusts controls to insure safe and efficient boiler operation and to meet demands for steam or high-temperature water. May also do one or more of the following: Maintain a log in which various aspects of boiler operation are recorded; clean, oil, make minor repairs or assist in repair to boiler room equipment; and following prescribed methods, treat boiler water with chemicals and analyze boiler water for such things as acidity, causticity, and alkalinity. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Carpenter, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Performs the carpentry duties necessary to maintain in good repair building woodwork and equipment such as bins,	**Minimum Educational/Degree Requirements:** Associate degree preferred

cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood. Work involves most of the following: Planning and laying out of work from blueprints, drawings, models, or verbal instructions, using a variety of carpenter's hand tools, portable power tools and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. May supervise others in performance of duties.	**Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Electrician, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's hand tools and measuring and testing instruments. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Environmental Technician	**Minimum Years of Experience:** 4
Responsibilities: Conducts tests and field investigations to obtain data for use by environmental, engineering, and scientific personnel in determining sources and methods of controlling pollutants in air, water, and soil, utilizing knowledge of agriculture, chemistry, meteorology, and engineering principles and applied technologies. Conducts chemical and physical laboratory and field tests according to prescribed standards to determine characteristics or composition of solid, liquid, or gaseous materials and substances, using pH meter, chemicals, autoclaves, centrifuge spectrophotometer, microscope, analytical instrumentation, and chemical laboratory equipment. Collects samples of gases from smokestacks, and collects other air samples and meteorological data to assist in evaluation of atmospheric pollutants. Collects water samples from streams and lakes, or raw, semi processed or processed water, industrial waste water, or water from other sources to assess pollution problem. Collects soil, silt, or mud to determine chemical composition and nature of pollutants. Prepares sample for testing, records data, and prepares summaries and charts for review. Sets monitoring equipment to provide flow of information. Installs, operates, and performs routine maintenance on gas and fluid flow systems, chemical reaction systems, mechanical equipment, and other test instrumentation. May operate fixed or mobile monitoring or data collection station. May conduct bacteriological or other tests related to research in environmental or pollution control activity. May collect and analyze engine exhaust emissions to determine type and amount of pollutants. May specialize in one phase or type of environmental pollution or protection and be identified according to specialty. May supervise others.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Forklift Operator	**Minimum Years of Experience:** 4
Responsibilities: Operates a manually controlled gasoline, electric or liquid propane gas powered forklift to transport goods and mate-	**Minimum Educational/Degree Requirements:** Associate degree preferred

rials of all kinds about a warehouse, or other establishment. May supervise others in performance of duties.	**Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Heating, Ventilation and Air-Conditioning Mechanic	**Minimum Years of Experience:** 4
Responsibilities: Installs, services and repairs environmental-control systems utilizing knowledge of refrigeration theory, pipefitting and structural layout. Mounts compressor and condenser units on platform or floor, using hand tools, following blueprints or engineering specifications. Fabricates, assembles, and installs ductwork and chassis parts, using portable metalworking tools and welding equipment. Cuts and bends tubing to correct length and shape, using cutting and bending equipment and tools. Cuts and threads pipe, using machine-threading or hand-threading equipment. Joins tubing or pipes to various refrigerating units by means of sleeves, couplings, or unions, and solders joints, using torch, forming complete circuit for refrigerant. Installs expansion and discharge valves in circuit. Connects motors, compressors, temperature controls, humidity controls, and circulating ventilation fans to control panels and connects control panels to power source. Injects small amount of refrigerant into compressor to test systems and adds freon gas to build up prescribed operating pressure. Observes pressure and vacuum gauges and adjusts controls for proper operation. Tests joints and connections for gas leaks, using gauges or soap-and-water solution. Wraps pipes in insulation batting and secures them in place. Replaces defective breaker controls, thermostats, switches, fuses, and electrical wiring to repair installed units, using hand tools and test equipment. May install, repair, and service air conditioners, ranging from fifteen to twenty tons cooling capacity, in warehouses and small factory buildings. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Heavy Equipment Mechanic	**Minimum Years of Experience:** 4
Responsibilities: Analyzes malfunctions and repairs, rebuilds and maintains power equipment, such as cranes, power shovels, scrapers, paving machines, motor graders, trench-digging machines, conveyors, bulldozers, dredges, pumps, compressors and pneumatic tools. Operates and inspects machines or equipment to diagnose defects. Dismantles and reassembles equipment, using hoists and hand tools. Examines parts for damage or excessive wear, using micrometers and gauges. Replaces defective engines and subassemblies, such as transmissions. Tests overhauled equipment to insure operating efficiency. Welds broken parts and structural members. May direct workers engaged in cleaning parts and assisting with assembly and disassembly of equipment. May repair, adjust, and maintain mining machinery, such as stripping and loading shovels, drilling and cutting machines, and continuous mining machines.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Heavy Equipment Operator	**Minimum Years of Experience:** 4
Responsibilities: Operates heavy equipment such as cranes, clamshells, power shovels, motor graders, heavy loaders, carryalls, bulldozers, rollers, scrapers, and large industrial tractors with pan or scrapper attachments. Equipment is used to excavate, load or move dirt, gravel or other materials. Operator may read and interpret grade and slope stakes and simple plans. May grease, adjust, and make emergency repairs to equipment. May supervise others in perfor-	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position

mance of duties.	
Position: Lead Instrument Mechanic	**Minimum Years of Experience:** 4
Responsibilities: Installs, repairs, maintains, and adjusts indicating, recording, telemetering, and controlling instruments used to measure and control variables, such as pressure, flow, temperature, motion, force, and chemical composition, using hand tools and precision instruments. Disassembles malfunctioning instruments, and examines and tests mechanism and circuitry for defects. Troubleshoots equipment in or out of control system and replaces or repairs defective parts. Reassembles instrument and tests assembly for conformance with specifications, using instruments, such as potentiometer, resistance bridge, manometer, and pressure gauge. Inspects instruments periodically and makes minor calibration adjustments to insure functioning within specified standards. May adjust and repair final control mechanisms, such as automatically controlled valves or positioners. May calibrate instruments according to established standards. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Locksmith	**Minimum Years of Experience:** 4
Responsibilities: Installs, repairs, modifies, and opens a variety of locking mechanisms found on doors, desks, compartments, mobile equipment, safes, and vaults. Examines locking mechanism and installs new unit or disassembles unit and replaces worn tumblers, springs, and other parts or repairs them by filing, drilling, chiseling and grinding. Opens door locks by moving lock pick in cylinder or opens safe locks by listening to lock sounds or by drilling. Makes new or duplicate keys, using key cutting machine. Changes combination by inserting new or repaired tumblers into lock. Establishes keying systems for buildings. May supervise others.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Machinery Maintenance Mechanic	**Minimum Years of Experience:** 4
Responsibilities: Repairs machinery or mechanical equipment. Work involves most of the following: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of hand tools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines and making all necessary adjustments for operation. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Machinist, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's hand tools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for this work; and fitting and assembling parts into mechanical equipment. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position

Position: Lead Painter, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Paints and redecorates walls, woodwork and fixtures. Work involves the following: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Pest Controller	**Minimum Years of Experience:** 4
Responsibilities: Sprays chemical solutions or toxic gases and sets mechanical traps to kill pests that infest buildings and surrounding areas. Fumigates rooms and buildings, using toxic gases. Sprays chemical solutions or dusts powders in rooms and work areas. Places poisonous paste or bait and mechanical traps where pests are present. May clean areas that harbor pests, using rakes, brooms, shovels, and mops preparatory to fumigating. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Pipefitter, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Installs or repairs water, steam, gas or other types of pipe and pipefittings. Work involves most of the following: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer, oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies, bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow and size of pipe required; and making standard tests to determine whether finished pipes meet specifications. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Plumber, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Assembles, installs, and repairs pipes, fittings and fixtures of heating, water, and drainage systems, according to specifications and plumbing codes. Studies building plans and working drawings to determine work aids required and sequence of installations. Inspects structure to ascertain obstructions to be avoided to prevent weakening of structure resulting from installation of pipe. Locates and marks position of pipe and pipe connections and passage holes for pipes in walls and floors, using ruler, spirit level, and plumb bob. Cuts openings in walls and floors to accommodate pipe and pipe fittings, using hand tools and power tools. Cuts and threads pipe, using pipe cutters, cutting torch, and pipe-threading machine. Bends pipe to required angle by use of pipe-bending machine or by placing pipe over block and bending it by hand. Assembles and installs valves, pipe fittings, and pipes composed of metals, such as iron, steel, brass and lead, and nonmetals, such as glass, vitrified clay, and plastic, using hand tools and power tools. Joins pipe by use of screws, bolts, fittings, solder, plastic solvent, and calks joints. Fills pipe system with water or air and reads pressure gauges to determine whether system is leaking. Installs and repairs plumbing fixtures, such as sinks, commodes, bathtubs, water heaters, hot water tanks, garbage disposal units, dishwashers, and water softeners. Repairs and maintains plumbing by replacing washers in leaky faucets, mending burst pipes, and opening clogged drains. May weld holding fixtures	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position

to steel structural members. May supervise others.	
Position: Lead Service Order Dispatcher	**Minimum Years of Experience:** 4
Responsibilities: Receives, records, and distributes work orders to service crews upon customers' requests for service on articles or utilities purchased from wholesale or retail establishment or utility company. Records information, such as name, address, article to be repaired, or service to be rendered. Prepares work order and distributes to service crew. Schedules service call and dispatches service crew. Calls or writes customer to insure satisfactory performance of service. Keeps record of service calls and work orders. May dispatch orders and relay messages and special instructions to mobile crews and other departments, using radio telephone equipment. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Sewage Plant Operator	**Minimum Years of Experience:** 4
Responsibilities: Operates sewage treatment, sludge processing, and disposal equipment in wastewater (sewage) treatment plant to control flow and processing of sewage: Monitors control panels and adjusts valves and gates manually or by remote control to regulate flow of sewage. Observes variations in operating conditions and interprets meter and gauge readings, and tests results to determine load requirements. Starts and stops pumps, engines and generators to control flow of raw sewage through filtering, settling, aeration, and sludge digestion processes. Maintains log of operations and records meter and gas readings. Gives directions to wastewater treatment-plant attendants and sewage-disposal workers in performing routine operations and maintenance. May operate and maintain power generating equipment to provide steam and electricity for plant. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Sheet-Metal Worker, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Fabricates, installs and maintains in good repair the sheet-metal equipment and fixtures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, metal roofing) of an establishment. Work involves most of the following: Planning and laying out all types of sheet-metal maintenance work from blueprints, models, or other specifications; setting up and operating all available types of sheet-metal working machines; using a variety of hand tools in cutting, bending, forming, shaping, fitting and assembling; and installing sheet-metal articles as required. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Stationary Engineer	**Minimum Years of Experience:** 4
Responsibilities: Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water or electricity. Duties involve: Observing and interpreting readings on gauges, meters and charts which register various aspects of the system's operation, adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Supply Technician	**Minimum Years of Experience:** 4

Responsibilities: Performs limited aspects of technical supply management work (e.g., inventory management, storage management, cataloging, property utilization) related to depot, local, or other supply activities. Work usually is segregated by commodity area or function, and controlled in terms of difficulty, complexity, or responsibility. Assignments usually relate to stable or standardized segments of technical supply management operations; or to functions or subjects that are narrow in scope or limited in difficulty. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Warehouse Specialist	**Minimum Years of Experience:** 4
Responsibilities: Directs and performs a variety of warehousing duties which require an understanding of the establishment's storage plan. Work involves most of the following: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods; rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Water Treatment Plant Operator	**Minimum Years of Experience:** 4
Responsibilities: Controls treatment plant machines and equipment to purify and clarify water for human consumption and for industrial use. Operates and controls electric motors, pumps, and valves to regulate flow of raw water into treating plant. Dumps specified amounts of chemicals, such as chlorine, ammonia, and lime into water or adjust automatic devices that admit specified amounts of chemicals into tanks to disinfect, deodorize, and clarify water. Starts agitators to mix chemicals and allows impurities to settle to bottom of tank. Turns valves to regulate water through filter beds to remove impurities. Pumps purified water into water mains. Monitors panel board and adjusts controls to regulator flow rates, loss of head pressure and water elevation and distribution of water. Cleans tanks and filter beds, using backwashing (reverse flow of water). Repairs and lubricates machines and equipment, using hand- and power tools. Tests water samples to determine acidity, color, and impurities, using colorimeter, turbidimeter, and conductivity meter. Dumps chemicals such as alum into tanks to coagulate impurities and reduce acidity. Records data, such as residual content of chemicals, water turbidity, and water pressure. May operate portable water-purification plant to supply drinking water. May purify waste water from plant preparatory to pumping water into rivers and steams or city mains. May supervise others in performance of duties.	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position
Position: Lead Welder, Combination, Maintenance	**Minimum Years of Experience:** 4
Responsibilities: Welds metal components together to fabricate or repair products, such as machine parts, plant equipment, mobile homes, motors and generators, according to layouts, blueprints or work orders, using brazing and a variety of arc and gas welding equipment. Welds metal parts together, using both gas welding or brazing and any combination of arc welding processes. Performs related tasks such as thermal cutting and grinding. Repairs broken or cracked parts, fills holes, and increases size of metal parts. Positions	**Minimum Educational/Degree Requirements:** Associate degree preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Eight years experience in similar position

and clamps together components of fabricated metal products preparatory to welding. May locate and repair cracks in industrial engine cylinder heads, using inspection equipment and gas torch. May perform repairs only. May be required to pass employer performance tests or standard tests to meet certification standards of governmental agencies or professional and technical associations. May supervise others in performance of duties.	
Trade, Technical, and Clerical Positions	
Position: Accounting Clerk I	**Minimum Years of Experience:** 2
Responsibilities: Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts. Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the higher level clerk's attention.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Accounting Clerk II	**Minimum Years of Experience:** 3
Responsibilities: Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts. Performs one or more routine accounting clerical operations, such as: examining, verifying, and correcting accounting transactions to insure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Accounting Clerk III	**Minimum Years of Experience:** 4
Responsibilities: Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts. Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, Identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; Reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, Preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correct-	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

ing material. On routine assignments, employee selects and applies established procedures and techniques.	
Position: Administrative Assistant	**Minimum Years of Experience:** 4
Responsibilities: In addition to secretarial duties (filing, taking phone calls, scheduling appointments, making travel arrangements), this position will provide administrative support to executive staff with office management responsibilities to include budgeting, personnel records and payroll. May be required to work independently on projects requiring research and preparation of briefing charts and other presentation materials.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Alarm Monitor	**Minimum Years of Experience:** 2
Responsibilities: Operates communication equipment to receive incoming calls for assistance and dispatches personnel and equipment. Operates telephone console to receive incoming calls for assistance. Questions caller to determine nature of problem and type and number of personnel and equipment needed, following established guidelines. Scans status charts and computer screen to determine resources available. Monitors alarm system signals that indicate location of problem. Operates two-way radio to dispatch personnel and equipment and to relay instructions or information. Types commands on computer keyboard to update files and maintain logs. Tests communications and alarm equipment and backup systems to ensure serviceability.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Automotive Worker	**Minimum Years of Experience:** 2
Responsibilities: Performs a variety of minor repairs and services to maintain motor vehicles. Places and maintains decals on vehicles. Checks and replaces batteries. Rotates, repairs, and replaces tires. Washes, polishes, and cleans interiors and exteriors of vehicles. Drains, flushes, and replaces engine, transmission, and differential grease and oils. Checks, cleans, calibrates, and replaces spark plugs. Cleans and replaces oil and air filters. Adjusts brakes, replaces windshield wipers, and similar minor parts. Assists on major overhaul jobs by disassembling and cleaning parts, repairing components such as generators and water pumps, and replacing thermostats, points, electrical wiring and other items. Maintains tools and equipment, and cleans work areas.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; Automotive Service Excellence (ASE) **Substitution for Education:** Technical training at commensurate level
Position: Boiler Tender	**Minimum Years of Experience:** 2
Responsibilities: Tends one or more boilers to produce steam or high-temperature water for use in an establishment. Fires boiler. Observes and interprets readings on gauges, meters, and charts which register various aspects of boiler operation. Adjusts controls to insure safe and efficient boiler operation and to meet demands for steam or high-temperature water. May also do one or more of the following: Maintain a log in which various aspects of boiler operation are recorded; clean, oil, make minor repairs or assist in repair to boiler room equipment; and following prescribed methods, treat boiler water with chemicals and analyze boiler water for such things as acidity, causticity, and alkalinity.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

Position: Carpenter, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Performs the carpentry duties necessary to maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood. Work involves most of the following: Planning and laying out of work from blueprints, drawings, models, or verbal instructions, using a variety of carpenter's hand tools, portable power tools and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Carpet Layer	**Minimum Years of Experience:** 2
Responsibilities: Prepares floor by removing old carpet or other covering, stripping, patching, or cleaning floor. Measures and cuts carpeting to size, using carpet knife. Lays padding and places carpeting on top of padding. Cuts, trims, and stretches carpeting to fit along wall edges, openings, and projections. Installs metal edging and metal door strips. May lay carpet tiles, applying adhesive to floor. May transport carpeting to installation site.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Civil Engineering Technician	**Minimum Years of Experience:** 2
Responsibilities: Assists Civil Engineer in application of principles, methods, and techniques of civil engineering technology. Reviews project specifications and confer with Civil Engineer concerning assistance required, such as plan preparation, acceptance testing, evaluation of field conditions, design changes, and reports. Conducts materials testing and analysis, using tools and equipment and applying engineering knowledge necessary to conduct tests. Prepares reports detailing tests conducted and their results. Surveys project sites to obtain and analyze topographical details of sites, using maps and surveying equipment. Drafts detailed dimensional drawings such as those needed for highway plans, structural steel fabrication, and water control projects, performing duties as described under Drafter. Calculates dimensions, profile specifications, and quantities of materials such as steel, concrete, and asphalt, using calculator.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Computer Operator I	**Minimum Years of Experience:** 2
Responsibilities: Works under close personal supervision and is provided detailed written or oral guidance before and during assignments. As instructed, resolves common operating problems. May serve as an assistant operator working under close supervision or performing a portion of a more senior operator's work.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Computer Operator II	**Minimum Years of Experience:** 2
Responsibilities: Processes scheduled routines which present few difficult operating problems (e.g., infrequent or easily resolved error conditions). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure. May serve as an assistant operator, working under general supervision.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Computer Operator III	**Minimum Years of Experience:** 3

Responsibilities: Processes a range of scheduled routines. In addition to operating the system and resolving common error conditions, diagnoses and acts on machine stoppage and error conditions not fully covered by existing procedures and guidelines. In response to computer output instructions or error conditions, may deviate from standard procedures if standard procedures do not provide a solution. Refers problems which do not respond to corrective procedures.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Computer Operator IV	**Minimum Years of Experience:** 3
Responsibilities: Adapts to a variety of nonstandard problems which require extensive operator intervention. In response to computer output instructions or error conditions, chooses or devises a course of action from among several alternatives and alters or deviates from standard procedures if standard procedures do not provide a solution (e.g., reassigning equipment in order to work around faulty equipment or transfer channels); then refers problems. Typically, completed work is submitted to users without supervisory review.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; A+ Certification **Substitution for Education:** Technical training at commensurate level
Position: Computer Operator V	**Minimum Years of Experience:** 4
Responsibilities: Resolves a variety of difficult operating problems. In response to computer output instructions and error conditions or to avoid loss of information or to conserve computer time, operator deviates from standard procedures. Such actions may materially alter the computer unit's production plans. May spend considerable time away from the control station providing technical assistance to lower level operators and assisting programmers, systems analysts, and subject matter specialists in resolving problems.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; A+ Certification **Substitution for Education:** Technical training at commensurate level
Position: Computer Programmer I	**Minimum Years of Experience:** 2
Responsibilities: Assists higher level staff by performing elementary programming tasks which concern limited and simple data items and steps which closely follow patterns of previous work done in the organization, e.g., drawing flow charts, writing operator instructions, or coding and testing routines to accumulate counts, tallies, or summaries. May perform routine programming assignments under close supervision.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; Certified Computing Professional (CCP) **Substitution for Education:** Technical training at commensurate level
Position: Computer Programmer II	**Minimum Years of Experience:** 2
Responsibilities: Initial assignments are designed to develop competence in applying established programming procedures to routine problems. Performs routine programming assignments that do not require skilled background experience but do require knowledge of established programming procedures and data processing requirements. Works according to clear cut and complete specifications. The data are refined and the format of the final product is very similar to that of the input or is well defined when significantly different, i.e., there are few, if any, problems with interrelating varied records and outputs.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; Certified Computing Professional (CCP) **Substitution for Education:** Technical training at commensurate level
Position: Dispatcher, Motor Vehicle	**Minimum Years of Experience:** 2
Responsibilities: Assigns motor vehicles and drivers for use. Compiles list of available vehicles. Assigns vehicles according to factors, such as length and purpose of trip, freight or passenger requirements, and preferences. Issues keys, record sheets, and credential to drivers. Records time of departure, destination, cargo, and expected time of	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-

return. Investigates overdue vehicles. May confer with users to expedite or locate missing, misrouted, delayed, or damaged merchandise. Maintain record of mileage, fuel used, repairs made, and other expenses. May establish service or delivery routes. May supervise loading and unloading. May issue equipment to drivers, such as hand trucks, dollies, and blankets.	tions, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Drafter/CAD Operator I	**Minimum Years of Experience:** 2
Responsibilities: Prepares drawings of simple, easily visualized structures, systems, parts or equipment from sketches or marked-up prints. Selects appropriate templates or uses a compass and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Drafter/CAD Operator II	**Minimum Years of Experience:** 2
Responsibilities: Prepares various drawings of such units as construction projects or parts and assemblies, including various views, sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the occupation. Makes arithmetic computations using standard formulas. Familiar or recurring work is assigned in general terms. Unfamiliar assignments include information on methods, procedures, sources of information, and precedents to follow. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Drafter/CAD Operator III	**Minimum Years of Experience:** 3
Responsibilities: Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to draw land contours or to compute weights, center of gravity, load capacities, dimensions, quantities of material, etc. Works from sketches, models, and verbal information supplied by an engineer, architect, or designer to determine the most appropriate views, detail drawings, and supplementary information needed to complete assignments.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Drafter/CAD Operator IV	**Minimum Years of Experience:** 3
Responsibilities: Works closely with design originators, preparing drawings of unusual, complex, or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawing produced. Exercises independent judgment in selecting and interpreting data based on knowledge of the design intent. Although working primarily as a drafter, may occasionally interpret general designs prepared by others to complete minor details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Electrician, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses

generation, distribution, or utilization of electric energy. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's hand tools and measuring and testing instruments.	preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Electronics Technician Maintenance I	**Minimum Years of Experience:** 2
Responsibilities: Applies technical knowledge to perform simple or routine tasks following detailed instructions. Performs such tasks as replacing components and wiring circuits; repairing simple electronic equipment; and taking test readings using common instruments such as digital multimeters, signal generators, semiconductor testers, curve tracers, and oscilloscopes.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Electronics Technician Maintenance II	**Minimum Years of Experience:** 2
Responsibilities: Applies comprehensive technical knowledge to solve complex problems by interpreting manufacturers' manuals or similar documents. Work requires familiarity with the interrelationships of circuits and judgment in planning work sequence and in selecting tools and testing instruments.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Electronics Technician Maintenance III	**Minimum Years of Experience:** 3
Responsibilities: Applies advanced technical knowledge to solve unusually complex problems that typically cannot be solved solely by referencing manufacturers' manuals or similar documents. Work typically requires a detailed understanding of the interrelationships of circuits. Exercises independent judgment in performing such tasks as making circuit analyses, calculating wave forms, and tracing relationships in signal flow. Uses complex test instruments such as high frequency pulse generators, frequency synthesizers, distortion analyzers, and complex computer control equipment.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Engineering Technician I	**Minimum Years of Experience:** 2
Responsibilities: Performs simple routine tasks under close supervision or from detailed procedures. Assembles or installs equipment or parts requiring simple wiring, soldering, or connecting. Performs simple or routine tasks or tests such as tensile or hardness tests; operates and adjusts simple test equipment; records test data. Gathers and maintains specified records of engineering data such as tests, drawings, etc.; performs computations by substituting numbers in specified formulas; plots data and draws simple curves and graphs	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Engineering Technician II	**Minimum Years of Experience:** 2
Responsibilities: Performs standardized or prescribed assignments involving a sequence of related operations. Follows standard work methods on recurring assignments and specific instructions, assembles or constructs simple or standard equipment or parts; may service or repair simple instruments or equipment. Conducts a variety of	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-

tests using established methods. Prepares test specimens, adjusts, and operates equipment, and records test data, pointing out deviations resulting from equipment malfunction or observational errors. Extracts engineering data from various prescribed but nonstandard sources; processes the data following well-defined methods including elementary algebra and geometry; presents the data in prescribed form.	tions, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Engineering Technician III	**Minimum Years of Experience:** 3
Responsibilities: Performs assignments that are not completely standardized or prescribed. Selects or adapts standard procedures or equipment, using fully applicable precedents. Constructs components, subunits, or simple models or adapts standard equipment. May troubleshoot and correct malfunctions. Follows specific layout and scientific diagrams to construct and package simple devices and subunits of equipment. Conducts various tests or experiments which may require minor modifications in test setups or procedures as well as subjective judgments in measurement; selects, sets up, and operates standard test equipment and records test data. Extracts and compiles a variety of engineering data from field notes, manuals, lab reports, etc.; processes data, identifying errors or inconsistencies; selects methods of data presentation. Assists in design modification by compiling data related to design, specifications, and materials which are pertinent to specific items of equipment or component parts. Develops information concerning previous operational failures and modifications. Uses judgment and initiative to recognize inconsistencies or gaps in data and seeks to clarify information.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Engineering Technician IV	**Minimum Years of Experience:** 3
Responsibilities: Performs non-routine assignments of substantial variety and complexity, using operational precedents which are not fully applicable. Develops or reviews designs by extracting and analyzing a variety of engineering data. Applies conventional engineering practices to develop, prepare, or recommend schematics, designs, specifications, electrical drawings, and parts lists. Conducts tests or experiments requiring selection and adaptation or modification of a wide variety of critical test equipment and test procedures; sets up and operates equipment; records data, measures and records problems of significant complexity that sometimes require resolution at a higher level; and analyzes data and prepares test reports. Constructs experimental or prototype models to meet engineering requirements; conducts tests or experiments and redesigns as necessary; and records and evaluates data and reports findings.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Engineering Technician V	**Minimum Years of Experience:** 4
Responsibilities: Performs nonroutine and complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope or a portion of a larger and more diverse project. Selects and adapts plans, techniques, designs, or layouts. Designs, develops, and constructs major units, devices, or equipment; conducts tests or experiments; analyzes results and redesigns or modifies equipment to improve performance; and reports results. From general guidelines and specifications (e.g., size or weight requirements), develops designs for equipment without critical performance requirements which are difficult to satisfy such as engine parts, research instruments, or special purpose circuitry. Analyzes technical data to determine applicability to design problems;	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

selects from several possible design layouts; calculates design data; and prepares layouts, detailed specifications, parts lists, estimates, procedures, etc. May check and analyze drawings or equipment to determine adequacy of drawings and design. Plans or assists in planning tests to evaluate equipment performance. Determines test requirements, equipment modification, and test procedures; conducts tests using all types of instruments; analyzes and evaluates test results, and prepares reports on findings and recommendations.	
Position: Engineering Technician VI	**Minimum Years of Experience:** 4
Responsibilities: Independently plans and accomplishes complete projects or studies of broad scope and complexity. Prepares designs and specifications for various complex equipment or systems (e.g., a heating system in an office building, or new electronic components such as solid state devices for instrumentation equipment). Plans approach to solve design problems; conceives and recommends new design techniques; resolves design problems with contract personnel, and assures compatibility of design with other parts of the system. Designs and coordinates test set ups and experiments to prove or disprove the feasibility of preliminary design; uses untried and untested measurement techniques; and improves the performance of the equipment. May advise equipment users on redesign to solve unique operational deficiencies. Plans approach and conducts various experiments to develop equipment or systems characterized by (a) difficult performance requirements because of conflicting attributes such as versatility, size, and ease of operation; or (b) unusual combination of techniques or components. Arranges for fabrication of pilot models and determines test procedures and design of special test equipment.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Environmental Technician	**Minimum Years of Experience:** 2
Responsibilities: Conducts tests and field investigations to obtain data for use by environmental, engineering and scientific personnel in determining sources and methods of controlling pollutants in air, water, and soil, utilizing knowledge of agriculture, chemistry, meteorology, and engineering principles and applied technologies. Conducts chemical and physical laboratory and field tests according to prescribed standards to determine characteristics or composition of solid, liquid, or gaseous materials and substances, using pH meter, chemicals, autoclaves, centrifuge spectrophotometer, microscope, analytical instrumentation, and chemical laboratory equipment. Collects samples of gases from smokestacks, and collects other air samples and meteorological data to assist in evaluation of atmospheric pollutants. Collects water samples from streams and lakes, or raw, semi processed or processed water, industrial waste water, or water from other sources to assess pollution problem. Collects soil, silt, or mud to determine chemical composition and nature of pollutants. Prepares sample for testing, records data, and prepares summaries and charts for review. Sets monitoring equipment to provide flow of information. Installs, operates, and performs routine maintenance on gas and fluid flow systems, chemical reaction systems, mechanical equipment, and other test instrumentation. May operate fixed or mobile monitoring or data collection station. May conduct bacteriological or other tests related to research in environmental or pollution control activity. May collect and analyze engine exhaust emissions to determine type and amount of pollutants.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

Position: Fire Alarm System Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Inspects, tests, maintains, and repairs installed fire alarm detection and suppression systems in accordance with manufacturer's specifications and National Fire Protection Association standards. Inspects fire alarm equipment visually and replaces defective components. Tests initiating and signal circuits, detectors, and system transmitter and makes needed repairs. Checks pressure gauges on suppression system storage containers and recharges or replaces containers.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Fire Extinguisher Repairer	**Minimum Years of Experience:** 2
Responsibilities: Repairs and tests fire extinguishers in repair shops and in facilities, using hand tools and hydrostatic test equipment. Dismantles extinguisher and examines tubings, horns, head gaskets, cutter disks, and other parts for defects. Replaces worn or damaged parts, using hand tools. Cleans extinguishers and recharges them with materials, such as soda water and sulfuric acid, carbon tetrachloride, nitrogen or patented solutions. Tests extinguishers for conformity with legal specifications, using hydrostatic test equipment. May install cabinets and brackets to hold extinguishers.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Forklift Operator	**Minimum Years of Experience:** 2
Responsibilities: Operates a manually controlled gasoline, electric or liquid propane gas powered forklift to transport goods and materials of all kinds about a warehouse, or other establishment.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Fuel Distribution System Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Maintains and repairs fuel storage and distribution systems, using hand and power tools and testing instruments. Inspects fuel receiving, storage, and distribution facilities to detect and correct leakage, corrosion, faulty fittings, and malfunction of mechanical units, meters, and gauges such as distribution lines, float gauges, piping valves, pumps, and roof sumps. Inspects electrical wiring, switches, and controls for safe-operating condition, grounding, and adjustment. Lubricates and repacks valves. Lubricates pumps, replaces gaskets, and seals and corrects pumping equipment misalignment. Cleans strainers and filters, services water separators, and checks meters for correct delivery and calibration. Overhauls system components such as pressure regulating valves and excess valves. Disassembles, adjusts, aligns, and calibrates gauges and meters or replaces them. Removes and installs equipment such as filters and piping to modify system or repair and replace system component. Cleans fuel tanks and distribution lines. Removes corrosion and repaints surfaces. Overhauls vacuum and pressure vents, floating roof seals, hangers, and roof sumps. Maintains record of inspections and repairs.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Fuel Distribution System Operator	**Minimum Years of Experience:** 2
Responsibilities: Receives, stores, transfers, and issues fuel through pipelines at main-line or terminal stations. Receives fuel by tanker. Ships fuel by pipeline, tank car, tank truck, and barge. Prepares and checks receiving or ship's documents. Connects lines, grounding wires, and loading and off loading arms or hoses to pipelines. Visual-	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-

ly inspects samples of fuel, and checks gravity and flashpoint. Gauges tanks for water, temperature, and fuel levels. Checks pumping systems for correct operating pressure or unusual noises. Performs preventive maintenance and repairs on terminal systems. Assists in maintenance of government-owned railroad loading and switch area. Performs general housekeeping and grounds maintenance for terminal, pipeline and dock areas.	tions, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Gardener	**Minimum Years of Experience:** 2
Responsibilities: Plans and executes small scale landscaping operations and maintains grounds and landscape of household, business and other properties. Works with assistant in preparing and grading terrain, applying fertilizers, seeding, and sodding lawns, and transplanting shrubs and plants, and cultivates them, using gardening implements and power-operated equipment. Plants new and repairs established lawns, using seed mixtures and fertilizers recommended for particular soil type and lawn location. Locates and plants shrubs, trees, and flowers recommended for particular landscape effect or those selected by property owner. Mows and trims lawns, using hand or power mower. Trims shrubs and cultivates gardens. Sprays trees and shrubs and applies supplemental liquid and dry nutrients to lawn, trees and shrubs. Cleans ground, using rakes, brooms, and hose. May dig trenches and install drain tiles. May repair concrete and asphalt walks and driveways.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: General Clerk I	**Minimum Years of Experience:** 2
Responsibilities: Follows a few clearly detailed procedures in performing simple repetitive tasks in the same sequence, such as filing pre-coded documents in a chronological file or operating office equipment, e.g., photocopy or mailing machine.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: General Clerk II	**Minimum Years of Experience:** 2
Responsibilities: Follows a number of specific procedures in completing several repetitive clerical steps performed in a prescribed or slightly varied sequence, such as coding and filing documents in an extensive alphabetical file, simple posting to individual accounts, opening mail, running mail through metering machines, and calculating and posting charges. Little or no subject-matter knowledge is required, but the clerk needs to choose the proper procedure for each task.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: General Clerk III	**Minimum Years of Experience:** 3
Responsibilities: Work requires a familiarity with the terminology of the project. Selects appropriate methods from a wide variety of procedures or makes simple adaptations and interpretations of a limited number of substantive guides and manuals.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: General Maintenance Worker	**Minimum Years of Experience:** 2

Responsibilities: Performs general maintenance and repair of equipment and buildings requiring practical skill and knowledge (but not proficiency) in such trades as painting, carpentry, plumbing, masonry, and electrical work. Work involves a variety of the following duties: Replacing electrical receptacles, wires, switches, fixtures, and motors; using plaster or compound to patch minor holes and cracks in walls and ceilings; repairing or replacing sinks, water coolers, and toilets; painting structures and equipment; repairing or replacing concrete floors, steps, and sidewalks; replacing damaged paneling and floor tiles; hanging doors and installing door locks; replacing broken windows; and performing general maintenance on equipment and machinery.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Heating, Ventilation and Air-Conditioning Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Installs, services and repairs environmental-control systems in residences, department stores, office buildings and other commercial establishments, utilizing knowledge of refrigeration theory, pipefitting and structural layout. Mounts compressor and condenser units on platform or floor, using hand tools, following blueprints or engineering specifications. Fabricates, assembles, and installs ductwork and chassis parts, using portable metalworking tools and welding equipment. Installs evaporator unit in chassis or in air-duct system, using hand tools. Cuts and bends tubing to correct length and shape, using cutting and bending equipment and tools. Cuts and threads pipe, using machine-threading or hand-threading equipment. Joins tubing or pipes to various refrigerating units by means of sleeves, couplings or unions, and solders joints, using torch, forming complete circuit for refrigerant. Installs expansion and discharge valves in circuit. Connects motors, compressors, temperature controls, humidity controls, and circulating ventilation fans to control panels and connects control panels to power source. Installs air and water filters in completed installation. Injects small amount of refrigerant into compressor to test systems and adds freon gas to build up prescribed operating pressure. Observes pressure and vacuum gauges and adjusts controls to insure proper operation. Tests joints and connections for gas leaks, using gauges or soap-and-water solution. Wraps pipes in insulation batting and secures them in place with cement or wire bands. Replaces defective breaker controls, thermostats, switches, fuses and electrical wiring to repair installed units, using electrician's hand tools and test equipment. May install, repair and service air conditioners, ranging from fifteen to twenty tons cooling capacity, in warehouses and small factory buildings.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; CFC Universal **Substitution for Education:** Technical training at commensurate level
Position: Heavy Equipment Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Analyzes malfunctions and repairs, rebuilds and maintains power equipment, such as cranes, power shovels, scrapers, paving machines, motor graders, trench-digging machines, conveyors, bulldozers, dredges, pumps, compressors and pneumatic tools. Operates and inspects machines or equipment to diagnose defects. Dismantles and reassembles equipment, using hoists and hand tools. Examines parts for damage or excessive wear, using micrometers and gauges. Replaces defective engines and subassemblies, such as transmissions. Tests overhauled equipment to insure operating effi-	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty

ciency. Welds broken parts and structural members. May direct workers engaged in cleaning parts and assisting with assembly and disassembly of equipment. May repair, adjust, and maintain mining machinery, such as stripping and loading shovels, drilling and cutting machines, and continuous mining machines.	**Substitution for Education:** Technical training at commensurate level

Position: Heavy Equipment Operator	**Minimum Years of Experience:** 2
Responsibilities: Operates heavy equipment such as cranes, clam-shells, power shovels, motor graders, heavy loaders, carryalls, bull-dozers, rollers, scrapers, and large industrial tractors with pan or scrapper attachments. Equipment is used to excavate, load or move dirt, gravel or other materials. Operator may read and interpret grade and slope stakes and simple plans. May grease, adjust, and make emergency repairs to equipment.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-tions, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Instrument Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Installs, repairs, maintains, and adjusts indicating, recording, telemetering, and controlling instruments used to measure and control variables, such as pressure, flow, temperature, motion, force, and chemical composition, using hand tools and precision in-struments. Disassembles malfunctioning instruments, and examines and tests mechanism and circuitry for defects. Troubleshoots equipment in or out of control system and replaces or repairs defec-tive parts. Reassembles instrument and tests assembly for conform-ance with specifications, using instruments, such as potentiometer, resistance bridge, manometer, and pressure gauge. Inspects instru-ments periodically and makes minor calibration adjustments to insure functioning within specified standards. May adjust and repair final control mechanisms, such as automatically controlled valves or posi-tioners. May calibrate instruments according to established standards	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-tions, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Janitor	**Minimum Years of Experience:** 2
Responsibilities: Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fix-tures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-tions, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Laborer	**Minimum Years of Experience:** 1 or less
Responsibilities: Performs tasks which require mainly physical abili-ties and effort involving little or no specialized skill or prior work experience. Loads and unloads trucks, and other conveyances; moves supplies and materials to proper location by wheelbarrows or hand-trucks; stacks materials for storage or binning; collects refuse and salvageable materials. Digs, fills, and tamps earth excavations; levels ground using pick, shovel, tamper and rake; shovels concrete and snow; cleans culverts and ditches; cuts tree and brush; operates power lawnmowers. Moves and arranges heavy pieces of office and household furniture, equipment, and appliances; moves heavy pieces of automotive, medical engineering, and other types of machinery and equipment. Spreads sand and salt on icy roads and walk-ways; picks up leaves and trash.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-tions, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Laborer, Grounds Maintenance	**Minimum Years of Experience:** 1 or less
Responsibilities: Maintains grounds of industrial, commercial or public property such as buildings, camp and picnic grounds, parks, playgrounds, greenhouses, and athletic fields, and repairs structures and equipment, performing one or more of the following tasks: Cuts grass, using walking-type or riding mowers (less than 2000 lbs.). Trims hedges and edges around walks, flower beds, and wells, using	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-tions, or specific to specialty

hedge trimmers, clippers and edging tools. Prunes shrubs and trees to shape and improve growth, using shears and other hand tools. Sprays lawn, shrubs, and trees with fertilizer or insecticide. Plants grass, flowers, trees, and shrubs. Waters lawn and shrubs during dry periods, using hose or activating sprinkler system. Picks up and burns or carts away leaves, paper or other litter. Removes snow from walks, driveways, roads, or parking lots, using shovel and snow blower. Spreads salt on walkways and other areas. Repairs and paints fences, gates, benches, tables, guardrails, and outbuildings. Assists in repair of roads, walks, buildings, and mechanical equipment. May clean comfort stations, office and workshop areas, and parking lots by sweeping, washing, mopping and polishing	**Substitution for Education:** Technical training at commensurate level
Position: Locksmith	**Minimum Years of Experience:** 2
Responsibilities: Installs, repairs, modifies, and opens a variety of locking mechanisms found on doors, desks, compartments, mobile equipment, safes, and vaults. Examines locking mechanism and installs new unit or disassembles unit and replaces worn tumblers, springs, and other parts or repairs them by filing, drilling, chiseling and grinding. Opens door locks by moving lock pick in cylinder or opens safe locks by listening to lock sounds or by drilling. Makes new or duplicate keys, using key cutting machine. Changes combination by inserting new or repaired tumblers into lock. Establishes keying systems for buildings.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Machinery Maintenance Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Repairs machinery or mechanical equipment. Work involves: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of hand tools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines and making all necessary adjustments for operation.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Machinist, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment. Work involves: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's hand tools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for this work; and fitting and assembling parts into mechanical equipment.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Maintenance Trades Helper	**Minimum Years of Experience:** 1
Responsibilities: Assists one or more workers in the skilled maintenance trades by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regula-

directed by journeyman.	tions, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Material Coordinator	**Minimum Years of Experience:** 2
Responsibilities: Coordinates and expedites flow of material, parts, and assemblies within or between departments in accordance with production and shipping schedules or department supervisors' priorities. Reviews production schedules and confers with department supervisors to determine material required or overdue and to locate material. Requisitions material and establishes delivery sequences according to job order priorities and anticipated availability of material. Arranges transfer of materials to meet schedules. Arranges with supervisors for repair and assembly of material and its transportation to various job sites. Examines material delivered to verify if type specified.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Material Expediter	**Minimum Years of Experience:** 2
Responsibilities: Locates and moves materials and parts between work areas expedite goods according to predetermined schedules and priorities, and keeps related records: Reviews schedules inventory reports, and work orders to determine types, quantities, and availability of required material and priorities. Confers with supervisors to determine materials overdue and to inform them of location, availability, and condition of materials. Locates and moves materials to specified sites using cart or hand truck. Records quantity and type of materials distributed and on hand. May compare work ticket specifications with material to verify appropriateness. May prepare worker production records and timecards. May update and maintain inventory records.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Material Handling Laborer	**Minimum Years of Experience:** 1 or less
Responsibilities: Performs physical tasks to transport or store materials. Duties involve the following: Manually loading or unloading freight cars, trucks, or other transporting devices; unpacking, shelving, or placing items in proper storage locations; or transporting goods by hand truck, cart, or push cart.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Mobile Equipment Servicer	**Minimum Years of Experience:** 2
Responsibilities: Operating from a mobile fuel station and/or tanker performing the following duties: Supplies all types of vehicles with gasoline or diesel fuel, and records mileage and tag numbers. Checks fluid levels of transmissions, battery, cooling system, and engine oil. Checks tires for wear and for pressure. Replaces wiper blades, fuses, sealed beam lights, and light bulbs. Inspects equipment and performs preventive maintenance services. Changes oil, filters, lubricates and greases vehicles. Washes and cleans interiors and exteriors of vehicles; maintains inventories of parts and supplies; and cleans and maintains work areas	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Order Clerk I	**Minimum Years of Experience:** 2
Responsibilities: Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual or similar document to insure that proper item is supplied or to verify price of ordered item.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regula-

	tions, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Order Clerk II	**Minimum Years of Experience:** 2
Responsibilities: Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Painter, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Paints and redecorates walls, woodwork and fixtures. Work involves the following: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead and other paint ingredients to obtain proper color or consistency.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Personal Computer Support Technician	**Minimum Years of Experience:** 2
Responsibilities: Provides support to distributed PC/networking environment including installation, testing, repair, and troubleshooting for stand-alone PCs, PCs linked to networks, printers, and other computer peripherals. Support responsibilities include software installation, and configurations. This technician performs technical, operational, and training support to users of personal computers either by telephone, or on-site for PC desktop hardware and software packages. Job duties require the technician to install and test personal computers, printers, and other peripherals, configure operating system, load shrink-wrap programs and other application software programs. In this position, the incumbent troubleshoots computer problems, performs hardware and software diagnostics, coordinates needed repairs, resolves computer system problems, including coordination between users and components of a local area network, and participates in the evaluation of system configuration and software.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty; A+ certification
	Substitution for Education: Technical training at commensurate level
Position: Personnel Assistant (Employment) I	**Minimum Years of Experience:** 2
Responsibilities: Performs routine tasks which require a knowledge of personnel procedures and rules, such as: providing simple employment information and appropriate lists and forms to applicants or employees on types of jobs being filled, procedures to follow, and where to obtain additional information; ensuring that the proper forms are completed for name changes, locator information, applications, etc. and reviewing completed forms for signatures and proper entries; or maintaining personnel records, contacting appropriate sources to secure any missing items, and posting items such as dates of promotions, transfer, and hire, or rates of pay or personal data. If this information is computerized, outside inquiries for simple factual information, such as verification of dates of employment in response to telephone credit checks of employees. Some receptionist or other clerical duties may be performed.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level

Position: Personnel Assistant (Employment) II	**Minimum Years of Experience:** 2
Responsibilities: Examines and/or processes personnel action documents using experience in applying personnel procedures and policies. Ensures that information is complete and consistent and determines whether further discussion with applicants or employees is needed or whether personnel information must be checked against additional files or listings. Responds to questions from applicants, employees, or managers; with skill to secure cooperation in correcting improperly completed personnel documents or to explain regulations and procedures. May provide information to managers on availability of applicants and status of hiring actions; may verify employment dates and places supplied on applications; may maintain personnel records; and administer typing and stenography test.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Personnel Assistant (Employment) III	**Minimum Years of Experience:** 3
Responsibilities: Serves as a clerical expert in independently processing the most complicated types of personnel actions, e.g., temporary employment, rehires, and dismissals and in providing information when it is necessary to consolidate data from a number of sources, often with short deadlines. Screens applications for obvious rejections. Resolves conflicts in computer listings or other sources of employee information. Locates lost documents or reconstructs information using a number of sources. May check references of applicants when information in addition to dates and places of past work is needed, and judgment is required to ask appropriate routine follow-up questions. Performs routine personnel assignments beyond the clerical level, such as: orienting new employees to programs, facilities, rules on time and attendance, and leave policies; computing basic statistical information for reports on manpower profiles, EEO progress and accomplishments, hiring activities, attendance and leave profiles, turnover, etc.; and screening applicants for well-defined positions, rejecting those who do not qualify for available openings for clear cut reasons, referring others to appropriate employment interviewer	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Pest Controller	**Minimum Years of Experience:** 2
Responsibilities: Sprays chemical solutions or toxic gases and sets mechanical traps to kill pests that infest buildings and surrounding areas. Fumigates rooms and buildings, using toxic gases. Sprays chemical solutions or dusts powders in rooms and work areas. Places poisonous paste or bait and mechanical traps where pests are present. May clean areas that harbor pests, using rakes, brooms, shovels, and mops preparatory to fumigating.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; state license **Substitution for Education:** Technical training at commensurate level
Position: Pipefitter, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Installs or repairs water, steam, gas or other types of pipe and pipefittings. Work involves: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer, oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies, bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow and size of pipe required; and making standard tests to determine whether finished pipes meet specifications.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

Position: Plumber, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Assembles, installs and repairs pipes, fittings and fixtures of heating, water, and drainage systems, according to specifications and plumbing codes. Studies building plans and working drawings to determine work aids required and sequence of installations. Inspects structure to ascertain obstructions to be avoided to prevent weakening of structure resulting from installation of pipe. Locates and marks position of pipe and pipe connections and passage holes for pipes in walls and floors, using ruler, spirit level, and plumb bob. Cuts openings in walls and floors to accommodate pipe and pipe fittings, using hand tools and power tools. Cuts and threads pipe, using pipe cutters, cutting torch, and pipe-threading machine. Bends pipe to required angle by use of pipe-bending machine or by placing pipe over block and bending it by hand. Assembles and installs valves, pipe fittings, and pipes composed of metals, such as iron, steel, brass and lead, and nonmetals, such as glass, vitrified clay, and plastic, using hand tools and power tools. Joins pipe by use of screws, bolts, fittings, solder, plastic solvent, and calks joints. Fills pipe system with water or air and reads pressure gauges to determine whether system is leaking. Installs and repairs plumbing fixtures, such as sinks, commodes, bathtubs, water heaters, hot water tanks, garbage disposal units, dishwashers, and water softeners. Repairs and maintains plumbing by replacing washers in leaky faucets, mending burst pipes, and opening clogged drains. May weld holding fixtures to steel structural members.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Pneudraulic Systems Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Maintains, modifies, and repairs hydraulic and pneumatic systems and components that actuate mechanisms or produce, control, and regulate the flow of fluids (liquids and gases). Tests for and isolates malfunctions in hydraulic and pneumatic systems or components, utilizing technical manuals and schematics. Modifies, repairs or disassembles and overhauls systems or components.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Production Control Clerk	**Minimum Years of Experience:** 2
Responsibilities: Compiles and records production data for industrial establishments to compare records and reports on volume of production, consumption of material, quality control, and other aspects of production, performing any combination of the following duties: Compiles and records production data from such documents as customer orders, work tickets, product specifications, and individual worker production sheets, following prescribed recording procedures and using typewriter and other devices. Calculates such factors as types and quantities of items produced, materials used, amount of scrap, frequency of defects, and worker and department production rates, using adding machine or calculator. Writes production reports based on data compiled, tabulated, and computed, following prescribed formats. Maintains files of documents used and prepared. Compiles from customer orders and other specifications detailed production sheets or work tickets for use by production workers as guides in assembly or manufacture of products. Prepares work schedules based on established guidelines and priorities. Compiles material inventory records and prepares requisitions for procurement of materials and supplies. Charts production, using chart, graph, or	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

pegboard, based on statistics compiled for reference by production and management personnel. Sorts and distributes work tickets or material to workers. May compute wages from employee time cards and post wage data on records for preparation of payroll.	
Position: Pruner	**Minimum Years of Experience:** 2
Responsibilities: The Pruner identifies and inspects trees for damage and/or diseases. Uses loppers to remove limbs from designated trees, applies spacing guidelines for selection of best trees, and cuts or severs all live or dead limbs of selected trees to a specified height.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Recycling Laborer	**Minimum Years of Experience:** 1 or less
Responsibilities: Sorts through collected trash and debris for recyclable materials and separates items into established categories such as aluminum, ferrous metals, glass, high-grade white paper, and corrugated paper. Discards contaminants and other items that cannot be recycled.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Recycling Specialist	**Minimum Years of Experience:** 2
Responsibilities: Conducts variety of tests such as magnetic checks and tests to determine solubility of glues and similar contaminants to determine type and quality of recyclable materials, stores recyclable materials for maximum convenience of handling preparatory to shipment and for protection from deterioration, operates forklift to transport and stock loaded pallets in warehouse, semi-tractor trailers and railroad boxcars; prepares receipts and reports concerning materials collected and chipped, may assist in operating large capacity industrial machinery such as paper shredder, magnetic can separator, glass crusher, baler and compactor, may assist in performing preventive maintenance, minor repairs.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Refuse Collector	**Minimum Years of Experience:** 1
Responsibilities: Picks up garbage, trash, or refuse from homes and businesses and other locations, and deposits it in a truck.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level
Position: Secretary I	**Minimum Years of Experience:** 2
Responsibilities: Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office. Responds to routine telephone requests which have standard answers; refers calls and visitors to appropriate staff. Controls mail	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred
	Training or Certification Requirements: As may be required by local, state, or federal regulations, or specific to specialty
	Substitution for Education: Technical training at commensurate level

and assures timely staff response; may send form letters. As instructed, maintains supervisor's calendar, makes appointments, and arranges for meeting rooms. Reviews materials prepared for supervisor's approval for typographical accuracy and proper format. Maintains recurring internal reports, such as time and leave records, office equipment listings, correspondence controls, and training plans. Requisitions supplies, printing, maintenance, or other services. Types, takes and transcribes dictation, and establishes and maintains office files.	
Position: Secretary II	**Minimum Years of Experience:** 2
Responsibilities: Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office. Screens telephone calls, visitors, and incoming correspondence; personally responds to requests for information concerning office procedures; determines which requests should be handled by the supervisor, appropriate staff member or other offices. May prepare and sign routine, nontechnical correspondence in own or supervisor's name. Schedules tentative appointments without prior clearance. Makes arrangements for conferences and meetings and assembles established background materials, as directed. May attend meetings and record and report on the proceedings. Reviews outgoing materials and correspondence for internal consistency and conformance with supervisor's procedures; assures that proper clearances have been obtained, when needed. Collects information from the files or staff for routine inquiries on office program(s) or periodic reports. Refers nonroutine requests to supervisor or staff. Explains to subordinate staff supervisor's requirements concerning office procedures. Coordinates personnel and administrative forms for the office and forwards for processing.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Secretary III	**Minimum Years of Experience:** 3
Responsibilities: Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office. Based on a knowledge of the supervisor's views, composes correspondence on own initiative about administrative matters and general office policies for supervisor's approval. Anticipates and prepares materials needed by the supervisor for conferences, correspondence, appointments, meetings, telephone calls, etc., and informs supervisor on matters to be considered. Prepares special or one-time reports, summaries, or replies to inquiries, selecting relevant information from a variety of sources such as reports, documents, correspondence, other offices, etc., under general directions. Advises secretaries in subordinate offices on new procedures; requests information needed from the subordinate office(s) for periodic or special	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; Microsoft Office User Specialist (MOUS) **Substitution for Education:** Technical training at commensurate level

conferences, reports, inquiries, etc. Shifts clerical staff to accommodate workload needs.	
Position: Service Order Dispatcher	**Minimum Years of Experience:** 2
Responsibilities: Receives, records, and distributes work orders to service crews upon customers' requests for service. Records information, such as name, address, article to be repaired, or service to be rendered. Prepares work order and distributes to service crew. Schedules service call and dispatches service crew. Calls or writes customer to insure satisfactory performance of service. Keeps record of service calls and work orders. May dispatch orders and relay messages and special instructions to mobile crews and other departments, using radio telephone equipment.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Sewage Plant Operator	**Minimum Years of Experience:** 2
Responsibilities: Operates sewage treatment, sludge processing, and disposal equipment in wastewater (sewage) treatment plant to control flow and processing of sewage. Monitors control panels and adjust valves and gates manually or by remote control to regulate flow of sewage. Observes variations in operating conditions and interprets meter and gauge readings, and tests results to determine load requirements. Starts and stops pumps, engines and generators to control flow of raw sewage through filtering, settling, aeration, and sludge digestion processes. Maintains log of operations and records meter and gas readings. Gives directions to wastewater treatment-plant attendants and sewage-disposal workers in performing routine operations and maintenance. May collect sewage sample, using dipper or bottle and conduct laboratory tests, using testing equipment, such as colorimeter. May operate and maintain power generating equipment to provide steam and electricity for plant	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Sheet-Metal Worker, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Fabricates, installs and maintains in good repair the sheet-metal equipment and fixtures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, metal roofing) of an establishment. Work involves: Planning and laying out all types of sheet-metal maintenance work from blueprints, models, or other specifications; setting up and operating all available types of sheet-metal working machines; using a variety of hand tools in cutting, bending, forming, shaping, fitting and assembling; and installing sheet-metal articles as required.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Shipping Packer	**Minimum Years of Experience:** 2
Responsibilities: Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and may involve one or more of the following: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Shipping/Receiving Clerk	**Minimum Years of Experience:** 2
Responsibilities: Performs clerical and physical tasks in connection with shipping goods of the establishment in which employed and	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses

receiving incoming shipments. In performing day-to-day, routine tasks, follows established guidelines. In handling unusual nonroutine problems, receives specific guidance from supervisor or other officials. May direct and coordinate the activities of other workers engaged in handling goods to be shipped or being received. Shipping duties typically involve the following: Verifying that orders are accurately filled by comparing items and quantities of goods gathered for shipment against documents; insuring that shipments are properly packaged, identified with shipping information, and loaded into transporting vehicles; and preparing and keeping records of goods shipped, e.g., manifests, bills of lading. Receiving duties typically involve the following: Verifying the correctness of incoming shipments by comparing items and quantities unloaded against bills of lading, invoices, manifests, storage receipts, or other records; checking for damaged goods; insuring that goods are appropriately identified for routing to departments within the establishment; preparing and keeping records of goods received.	preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Small Engine Mechanic	**Minimum Years of Experience:** 2
Responsibilities: Repairs fractional-horsepower gasoline engines used to power lawnmowers, garden tractors, and similar machines, using hand tools. Locates causes of trouble, dismantles engines, using hand tools, and examines parts for defects. Replaces or repairs parts, such as rings and bearings, using hand tools. Cleans and adjusts carburetor and magneto. Starts repaired engines and listens to sounds to test performance.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Stationary Engineer	**Minimum Years of Experience:** 2
Responsibilities: Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water or electricity. Duties involve: Observing and interpreting readings on gauges, meters and charts which register various aspects of the system's operation, adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Stock Clerk	**Minimum Years of Experience:** 2
Responsibilities: Receives, stores, and issues equipment, materials, supplies, merchandise, foodstuffs, or tools, and compiles stock records of items in stockroom, warehouse, or storage yard. Counts, sorts, or weighs incoming articles to verify receipt of items on requisition or invoice. Examines stock to verify conformance to specifications. Stores articles in bins, on floor or on shelves, according to identifying information, such as style, size, or type of material. Fills orders or issues supplies from stock. Prepares periodic, special, or perpetual inventory of stock. Requisitions articles to fill incoming orders. Compiles reports on use of stock handling equipment, adjustments of inventory counts and stock records, spoilage of or damage to stock, location changes, and refusal of shipments. May mark	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

identifying codes, figures, or letters on articles.	
Position: Store Worker I	**Minimum Years of Experience:** 2
Responsibilities: Performs the following tasks at an establishment whose primary function is that of the resale of merchandise in a retail environment. Will move merchandise by use of non-motorized equipment that is intended for display and resale purposes. May be required to keep inventory forms of merchandise stocked and merchandise returned to storage. May be required to affix labels to merchandise indicating sale price, item description, or other information.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Supply Technician	**Minimum Years of Experience:** 2
Responsibilities: Performs limited aspects of technical supply management work (e.g., inventory management, storage management, cataloging, property utilization) related to depot, local, or other supply activities. Work usually is segregated by commodity area or function, and controlled in terms of difficulty, complexity, or responsibility. Assignments usually relate to stable or standardized segments of technical supply management operations; or to functions or subjects that are narrow in scope or limited in difficulty. The work generally involves individual case problems or supply actions. This work may require consideration of program requirements, together with specific variations in or from standardized guidelines.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Survey Party Chief	**Minimum Years of Experience:** 3
Responsibilities: Leads day-to-day work activities of survey party under direction of land surveyor performing surveying duties not requiring licensure; supervises crew engaged in gathering data about the earth's surface using a variety of surveying instruments and in clearing land and setting stakes to identify certain points; checks final field notes for clarity and accuracy and completes transmittal forms.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Surveying Aide	**Minimum Years of Experience:** 2
Responsibilities: Performs duties to assist in surveying land: holds level or stadia rod at designated points to assist in determining elevations and laying out stakes for map making, construction, mining, land, and other surveys, calls out reading or writes station number and reading in notebook marks points of measurement with elevation, station number, or other identifying mark, and measures distance between survey points, using steel or cloth tape or surveyor's chain. Marks measuring point with keel (marking crayon), paint sticks, scratches, tacks, or stakes, places stakes at designated points and drives them into ground at specified elevation using hammer or hatchet, and cuts and clears brush and trees from line of survey, using brush hook, knife, ax, or other cutting tools.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Surveying Technician	**Minimum Years of Experience:** 3
Responsibilities: Obtains data pertaining to angles, elevations, points, and contours used for map making, mining, or other purposes, using alidade, level, transit, plane table, theodolite, electronic distance measuring equipment, and other surveying instruments, compiles notes, sketches, and records of data obtained and work performed, and directs work of subordinate members of survey team.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty

	Substitution for Education: Technical training at commensurate level
Position: Telecommunications Mechanic I	**Minimum Years of Experience:** 2
Responsibilities: Installs, removes, maintains, modifies, troubleshoots, and repairs voice and/or non-voice communications systems including intercom and public address systems; alarm systems; teletype equipment; and electronic and electromechanical telephone key systems/PBAXs; terminal and communications equipment, including line drivers. Runs cables, key cables, or house wire to all telephone sets, terminal connectors, lugs, pins, or screws, associated with key telephone equipment and/or terminating equipment for non-voice circuits.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Telecommunications Mechanic II	**Minimum Years of Experience:** 2
Responsibilities: Installs, tests, troubleshoots, programs, maintains, and repairs digital switching equipment, attendant consoles, power and ringing relay racks, miscellaneous telephone, radio, fire alarms, intrusion alarms, and computer data circuits and related apparatus required in the central switching office. Analyzes system failures and other unusual system occurrences to isolate the source of the problem and determine whether the failure is caused by software, hardware, or other factors. Maintains manual and/or computerized central office records, including detail records, traffic analysis records, cable records, line records, subscriber service records and spare parts inventories.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty; Microsoft Certified Systems Engineer (MCSE) **Substitution for Education:** Technical training at commensurate level
Position: Tools and Parts Attendant	**Minimum Years of Experience:** 2
Responsibilities: Receives, stores, and issues hand tools, machine tools, dies, replacement parts, shop supplies and equipment, such as measuring devices, in industrial establishment. Keeps records of tools issued to and returned by workers. Searches for lost or misplaced tools. Prepares periodic inventory or keeps perpetual inventory and requisitions stock as needed. Unpacks and stores new equipment. Visually inspects tools or measures with micrometer for wear or defects and reports damaged or worn-out equipment to superiors. May coat tools with grease or other preservative, using brush or spray gun. May attach identification tags or engrave identifying information on tools and equipment, using electric marking tool.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Tractor Operator	**Minimum Years of Experience:** 2
Responsibilities: Drives gasoline or diesel powered tractor to move materials, draw implements, tow trailers, pull out objects embedded in ground, or pull cable of winch to raise, lower, or load heavy material or equipment. Fastens attachments such as graders, plows, rollers, mowers (over 2000 lbs.), backhoes, seeders, and disc harrows to tractor. Adjusts equipment for proper operation. Lubricates and makes minor repairs to tractor and attachments such as tightening bolts, and replacing washers, cotter pins, and screws.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Truckdriver, Heavy	**Minimum Years of Experience:** 2
Responsibilities: Drives a truck (over 4 tons, usually 10 wheels) to transport materials, merchandise, equipment, or workers between various types of establishments such as: manufacturing plants, freight depots, and warehouses, wholesale and retail establishments. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty

	Substitution for Education: Technical training at commensurate level
Position: Truckdriver, Light	**Minimum Years of Experience:** 2
Responsibilities: Drives a truck (under 1 ½ tons, usually 4 wheels) to transport materials, merchandise, equipment, or workers between various types of establishments such as: manufacturing plants, freight depots, and warehouses, wholesale and retail establishments. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Truckdriver, Medium	**Minimum Years of Experience:** 2
Responsibilities: Drives a truck (1 ½ to 4 tons inclusive, usually 6 wheels) to transport materials, merchandise, equipment, or workers between various types of establishments such as: manufacturing plants, freight depots, and warehouses, wholesale and retail establishments. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Truckdriver, Tractor-Trailer	**Minimum Years of Experience:** 2
Responsibilities: Drives a Tractor-Trailer combination (a trailer having a set or several sets of wheels at the rear only, with the forward portion being supported by the truck tractor or towing vehicle) to transport materials, merchandise, equipment, or workers between various types of establishments such as: manufacturing plants, freight depots, and warehouses, wholesale and retail establishments. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Ventilation Equipment Tender	**Minimum Years of Experience:** 2
Responsibilities: Tends ventilating and heating equipment, such as fans, vacuum pumps, air compressors, vents and ducts, and lubrication-oil coolers used in buildings or industrial processes. Adjusts valves to regulate temperature of lubrication oil and flow of water through system. Moves controls to regulate speed of fans and to adjust vents and ducts. Records gauge readings, repairs completed, and time lost because of inoperative equipment. Writes repair work order tickets and out-of-order tags preparatory to equipment repair. Inspects equipment to detect excessive noise and heat. Replaces gauges and tightens and chalks leaky fittings, using wrenches, hammers, and chalking tool. Cleans carbon deposits, pitch, and grease from fans, vents and ducts, using scrapers, hammer, and compressed air or steam.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Warehouse Specialist	**Minimum Years of Experience:** 2
Responsibilities: Performs a variety of warehousing duties which require an understanding of the establishment's storage plan. Work involves: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods;	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty

rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties.	**Substitution for Education:** Technical training at commensurate level
Position: Water Treatment Plant Operator	**Minimum Years of Experience:** 2
Responsibilities: Controls treatment plant machines and equipment to purify and clarify water for human consumption and for industrial use. Operates and controls electric motors, pumps, and valves to regulate flow of raw water into treating plant. Dumps specified amounts of chemicals, such as chlorine, ammonia, and lime into water or adjust automatic devices that admit specified amounts of chemicals into tanks to disinfect, deodorize, and clarify water. Starts agitators to mix chemicals and allows impurities to settle to bottom of tank. Turns valves to regulate water through filter beds to remove impurities. Pumps purified water into water mains. Monitors panel board and adjusts controls to regulator flow rates, loss of head pressure and water elevation and distribution of water. Cleans tanks and filter beds, using backwashing (reverse flow of water). Repairs and lubricates machines and equipment, using hand- and power tools. Tests water samples to determine acidity, color, and impurities, using colorimeter, turbidimeter, and conductivity meter. Dumps chemicals such as alum into tanks to coagulate impurities and reduce acidity. Records data, such as residual content of chemicals, water turbidity, and water pressure. May operate portable water-purification plant to supply drinking water. May purify waste water from plant preparatory to pumping water into rivers and steams or city mains.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Welder, Combination, Maintenance	**Minimum Years of Experience:** 2
Responsibilities: Welds metal components together to fabricate or repair products, such as machine parts, plant equipment, motors and generators, according to layouts, blueprints or work orders, using brazing and a variety of arc and gas welding equipment. Welds metal parts together, using both gas welding or brazing and any combination of arc welding processes. Performs related tasks such as thermal cutting and grinding. Repairs broken or cracked parts, fills holes, and increases size of metal parts. Positions and clamps together components of fabricated metal products preparatory to welding. May locate and repair cracks in industrial engine cylinder heads, using inspection equipment and gas torch. May perform repairs only.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Well Driller	**Minimum Years of Experience:** 2
Responsibilities: Sets up and operates portable drilling rig (machine and related equipment) to drill wells. Extends stabilizing jackscrews to support and level drilling rig. Moves levers to control power-driven winch that raises and extends telescoping mast. Bolts trusses and guy wires to raised mast and anchors them to machine frame and stakes. Assembles drilling tools, using hand tools or power tools. Moves levers and pedals to raise tools into vertical drilling position and lowers well casing (pipe that shores up walls of well) into well bore, using winch. Moves levers and pedals and turns hand wells to control reciprocating action of machine and to drive or extract well casing. Pumps water into well to facilitate drilling by cooling drill bit and removing drillings. Listens to sounds of drilling machine and feels cable or brake to determine drilling conditions and to identify	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

variations such as entering new strata or striking rock. Moves levers to adjust stroke and impact of cable tool drilling machine or changes drill bits of rotary drilling machine to fit changing conditions. Replaces drill bit with tool to collect samples of earth or rock being penetrated. Examines samples to determine nature of strata encountered or submits samples to laboratory for analysis. Records drilling progress and geological data. Splices worn or broken cable. May sharpen bits by heating them in forging furnace and hammering edges on anvil. May build up worn drill bits by arc welding, tempering bits in furnace, and by quenching them in water. May retrieve lost equipment from bore holes, using specialized retrieval tools and equipment. May fabricate well casings. May restore wells to active production	
Position: Woodcraft Worker	**Minimum Years of Experience:** 2
Responsibilities: Makes and repairs high-grade wooden items such as fine cabinets and furniture. Studies blueprints or drawings of articles to be constructed or repaired, and plans sequence of cutting or shaping operations. Marks outline or dimensions of parts on paper or lumber stock, according to blueprint or drawing specifications. Matches materials for color, grain, or texture. Sets up and operates woodworking machines, such as power saws, jointer, mortiser, tenoner, molder, and shaper, to cut and shape parts from woodstock. Trims component parts of joints to insure snug fit, using hand tools, such as planes, chisels, or wood files. Bores holes for insertion of screws or dowels by hand or using boring machine. Glues, fits, and clamps parts and subassemblies together to form complete unit, using clamps or clamping machine. Drives nails or other fasteners into joints at designated places to reinforce joints. Sands and scrapes surfaces and joints to prepare articles for finishing. May dip, brush, or spray assembled articles with protective or decorative materials, such as stain, varnish, or paint. Installs hardware, such as hinges, catches, and drawer pulls.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level
Position: Woodworker	**Minimum Years of Experience:** 2
Responsibilities: Constructs and repairs items such as boxes, crates, pallets, and storage bins from wood and wood substitutes. Studies specifications; and measures, marks, and cuts boards, using patterns, templates, ruler, pencil, and hand and power saws. Fastens or installs parts, using hammer, nailing machine, or power stapler. Repairs defective containers by replacing damaged parts. Inserts wood bracings, cardboard files, and felt pads in containers. May build crate around object, using ruler, hand tools, and pneumatic nailer. May fabricate, repair, modify, and replace woodwork on vehicle sides and beds. May apply preservative to prolong wood life. Packs, seals, bands, and applies markings to crates and containers.	**Minimum Educational/Degree Requirements:** High school diploma, or GED; college courses preferred **Training or Certification Requirements:** As may be required by local, state, or federal regulations, or specific to specialty **Substitution for Education:** Technical training at commensurate level

IV. Attachment C: Hourly Rates

HGS Engineering, Inc. is proud to furnish hourly rates for the above-mentioned Labor Categories. These rates are our very best and have been pre-negotiated by the Federal Government. For more information or to procure service, please call Mr. Harry Summers at (256) 236-1848 or email him at harry@hgsengineeringinc.com.

Rates are effective March 5, 2014.

Labor Categories	Awarded GSA Hourly Rate				
	3/5/14 thru 3/4/15	3/5/15 thru 3/4/16	3/5/16 thru 3/4/17	3/5/17 thru 3/4/18	3/5/18 thru 3/4/19
Project Manager	$100.57	$103.59	$106.69	$109.89	$113.19
Assistant Project Manager	$93.82	$96.64	$99.54	$102.52	$105.60
Business Manager	$89.32	$92.00	$94.76	$97.60	$100.53
Environmental Manager	$89.32	$92.00	$94.76	$97.60	$100.53
Quality Manager	$89.32	$92.00	$94.76	$97.60	$100.53
Safety Manager	$89.32	$92.00	$94.76	$97.60	$100.53
Training Manager	$89.32	$92.00	$94.76	$97.60	$100.53
Work Control Manager	$89.32	$92.00	$94.76	$97.60	$100.53
Facilities Supervisor	$82.56	$85.04	$87.59	$90.22	$92.93
Grounds Supervisor	$82.56	$85.04	$87.59	$90.22	$92.93
Maintenance Supervisor	$82.56	$85.04	$87.59	$90.22	$92.93
Plant Operations Supervisor	$82.56	$85.04	$87.59	$90.22	$92.93
Structures Supervisor	$82.56	$85.04	$87.59	$90.22	$92.93
Support Supervisor	$82.56	$85.04	$87.59	$90.22	$92.93
Utilities Supervisor	$82.56	$85.04	$87.59	$90.22	$92.93
Lead Automotive Worker	$45.55	$46.91	$48.32	$49.77	$51.26
Lead Boiler Tender	$51.15	$52.68	$54.26	$55.89	$57.57
Lead Carpenter, Maintenance	$41.74	$42.99	$44.28	$45.61	$46.97
Lead Electrician, Maintenance	$51.11	$52.64	$54.22	$55.85	$57.52
Lead Environmental Technician	$53.50	$55.10	$56.76	$58.46	$60.21
Lead Forklift Operator	$35.45	$36.52	$37.61	$38.74	$39.90
Lead Heating, Ventilation and Air-Conditioning Mechanic	$49.13	$50.60	$52.12	$53.69	$55.30
Lead Heavy Equipment Mechanic	$50.14	$51.64	$53.19	$54.79	$56.43
Lead Heavy Equipment Operator	$44.88	$46.22	$47.61	$49.04	$50.51
Lead Instrument Mechanic	$48.22	$49.67	$51.16	$52.70	$54.28
Lead Locksmith	$37.08	$38.19	$39.34	$40.52	$41.73
Lead Machinery Maintenance Mechanic	$46.67	$48.07	$49.51	$51.00	$52.53
Lead Machinist, Maintenance	$43.52	$44.82	$46.17	$47.55	$48.98
Lead Painter, Maintenance	$37.52	$38.65	$39.81	$41.00	$42.23
Lead Pest Controller	$35.11	$36.17	$37.25	$38.37	$39.52
Lead Pipefitter, Maintenance	$47.97	$49.41	$50.89	$52.41	$53.99
Lead Plumber, Maintenance	$45.76	$47.14	$48.55	$50.01	$51.51
Lead Service Order Dispatcher	$37.99	$39.13	$40.30	$41.51	$42.75
Lead Sewage Plant Operator	$40.67	$41.89	$43.15	$44.45	$45.78
Lead Sheet-Metal Worker, Maintenance	$45.48	$46.85	$48.25	$49.70	$51.19
Lead Stationary Engineer	$51.15	$52.68	$54.26	$55.89	$57.57
Lead Supply Technician	$56.86	$58.56	$60.32	$62.13	$63.99
Lead Warehouse Specialist	$35.45	$36.52	$37.61	$38.74	$39.90
Lead Water Treatment Plant Operator	$40.67	$41.89	$43.15	$44.45	$45.78
Lead Welder, Combination, Maintenance	$39.03	$40.20	$41.40	$42.65	$43.92
Accounting Clerk I	$29.62	$30.51	$31.43	$32.37	$33.34
Accounting Clerk II	$32.39	$33.37	$34.37	$35.40	$36.46

Labor Categories	Awarded GSA Hourly Rate				
	3/5/14 thru 3/4/15	3/5/15 thru 3/4/16	3/5/16 thru 3/4/17	3/5/17 thru 3/4/18	3/5/18 thru 3/4/19
Accounting Clerk III	$36.26	$37.34	$38.46	$39.62	$40.81
Administrative Assistant	$54.60	$56.24	$57.93	$59.66	$61.45
Alarm Monitor	$33.45	$34.46	$35.49	$36.56	$37.65
Automotive Worker	$43.29	$44.59	$45.93	$47.31	$48.72
Boiler Tender	$48.89	$50.36	$51.87	$53.43	$55.03
Carpenter, Maintenance	$39.49	$40.67	$41.90	$43.15	$44.45
Carpet Layer	$37.37	$38.49	$39.64	$40.83	$42.06
Civil Engineering Technician	$41.87	$43.13	$44.42	$45.75	$47.12
Computer Operator I	$36.08	$37.16	$38.28	$39.43	$40.61
Computer Operator II	$41.42	$42.66	$43.94	$45.26	$46.61
Computer Operator III	$46.21	$47.59	$49.02	$50.49	$52.01
Computer Operator IV	$51.34	$52.88	$54.46	$56.10	$57.78
Computer Operator V	$58.85	$60.62	$62.44	$64.31	$66.24
Computer Programmer I	$56.52	$58.21	$59.96	$61.76	$63.61
Computer Programmer II	$57.02	$58.73	$60.49	$62.31	$64.18
Dispatcher, Motor Vehicle	$43.14	$44.43	$45.76	$47.14	$48.55
Drafter/CAD Operator I	$41.78	$43.03	$44.32	$45.65	$47.02
Drafter/CAD Operator II	$43.42	$44.73	$46.07	$47.45	$48.87
Drafter/CAD Operator III	$47.78	$49.22	$50.69	$52.21	$53.78
Drafter/CAD Operator IV	$58.98	$60.75	$62.57	$64.45	$66.38
Electrician, Maintenance	$48.85	$50.32	$51.83	$53.38	$54.98
Electronics Technician Maintenance I	$39.07	$40.24	$41.45	$42.69	$43.97
Electronics Technician Maintenance II	$52.95	$54.54	$56.18	$57.86	$59.60
Electronics Technician Maintenance III	$58.51	$60.27	$62.08	$63.94	$65.86
Engineering Technician I	$36.26	$37.34	$38.46	$39.62	$40.81
Engineering Technician II	$43.50	$44.80	$46.15	$47.53	$48.96
Engineering Technician III	$46.59	$47.98	$49.42	$50.91	$52.43
Engineering Technician IV	$54.55	$56.19	$57.87	$59.61	$61.40
Engineering Technician V	$66.70	$68.70	$70.77	$72.89	$75.07
Engineering Technician VI	$75.79	$78.06	$80.40	$82.81	$85.30
Environmental Technician	$51.25	$52.79	$54.37	$56.01	$57.69
Fire Alarm System Mechanic	$38.56	$39.72	$40.91	$42.14	$43.40
Fire Extinguisher Repairer	$31.50	$32.44	$33.42	$34.42	$35.45
Forklift Operator	$33.21	$34.20	$35.23	$36.29	$37.37
Fuel Distribution System Mechanic	$45.62	$46.99	$48.40	$49.85	$51.34
Fuel Distribution System Operator	$36.09	$37.17	$38.29	$39.44	$40.62
Gardener	$29.31	$30.19	$31.10	$32.03	$32.99
General Clerk I	$27.23	$28.05	$28.89	$29.76	$30.65
General Clerk II	$33.36	$34.36	$35.39	$36.46	$37.55
General Clerk III	$35.99	$37.07	$38.18	$39.33	$40.51
General Maintenance Worker	$37.16	$38.28	$39.43	$40.61	$41.83
Heating, Ventilation and Air-Conditioning Mechanic	$46.88	$48.28	$49.73	$51.22	$52.76
Heavy Equipment Mechanic	$47.86	$49.30	$50.78	$52.30	$53.87
Heavy Equipment Operator	$42.63	$43.91	$45.23	$46.58	$47.98
Instrument Mechanic	$45.98	$47.36	$48.78	$50.24	$51.75
Janitor	$24.51	$25.25	$26.01	$26.79	$27.59
Laborer	$24.04	$24.76	$25.50	$26.27	$27.06
Laborer, Grounds Maintenance	$23.80	$24.52	$25.25	$26.01	$26.79

Labor Categories	Awarded GSA Hourly Rate				
	3/5/14 thru 3/4/15	3/5/15 thru 3/4/16	3/5/16 thru 3/4/17	3/5/17 thru 3/4/18	3/5/18 thru 3/4/19
Locksmith	$34.82	$35.87	$36.95	$38.05	$39.20
Machinery Maintenance Mechanic	$44.41	$45.75	$47.12	$48.53	$49.99
Machinist, Maintenance	$41.26	$42.50	$43.77	$45.09	$46.44
Maintenance Trades Helper	$28.22	$29.07	$29.94	$30.84	$31.76
Material Coordinator	$43.26	$44.56	$45.89	$47.27	$48.69
Material Expediter	$43.26	$44.56	$45.89	$47.27	$48.69
Material Handling Laborer	$29.30	$30.18	$31.09	$32.02	$32.98
Mobile Equipment Servicer	$37.49	$38.62	$39.78	$40.97	$42.20
Order Clerk I	$27.53	$28.36	$29.21	$30.08	$30.99
Order Clerk II	$31.30	$32.24	$33.21	$34.20	$35.23
Painter, Maintenance	$35.28	$36.34	$37.43	$38.55	$39.71
Personal Computer Support Technician	$51.34	$52.88	$54.46	$56.10	$57.78
Personnel Assistant (Employment) I	$34.24	$35.26	$36.32	$37.41	$38.53
Personnel Assistant (Employment) II	$38.32	$39.47	$40.65	$41.87	$43.12
Personnel Assistant (Employment) III	$42.81	$44.09	$45.41	$46.78	$48.18
Pest Controller	$32.87	$33.85	$34.87	$35.91	$36.99
Pipefitter, Maintenance	$45.69	$47.06	$48.47	$49.93	$51.43
Plumber, Maintenance	$43.52	$44.82	$46.17	$47.55	$48.98
Pneudraulic Systems Mechanic	$42.77	$44.05	$45.37	$46.73	$48.13
Production Control Clerk	$46.13	$47.52	$48.94	$50.41	$51.92
Pruner	$29.98	$30.88	$31.81	$32.76	$33.75
Recycling Laborer	$31.78	$32.73	$33.71	$34.72	$35.76
Recycling Specialist	$39.19	$40.37	$41.58	$42.83	$44.11
Refuse Collector	$27.69	$28.52	$29.37	$30.25	$31.16
Secretary I	$33.09	$34.09	$35.11	$36.16	$37.25
Secretary II	$39.17	$40.35	$41.56	$42.80	$44.09
Secretary III	$44.81	$46.15	$47.53	$48.96	$50.43
Service Order Dispatcher	$35.75	$36.82	$37.93	$39.07	$40.24
Sewage Plant Operator	$38.42	$39.57	$40.76	$41.98	$43.24
Sheet-Metal Worker, Maintenance	$43.23	$44.53	$45.86	$47.24	$48.65
Shipping Packer	$30.08	$30.98	$31.91	$32.86	$33.85
Shipping/Receiving Clerk	$30.08	$30.98	$31.91	$32.86	$33.85
Small Engine Mechanic	$36.11	$37.20	$38.31	$39.46	$40.64
Stationary Engineer	$48.89	$50.36	$51.87	$53.43	$55.03
Stock Clerk	$33.54	$34.54	$35.58	$36.65	$37.75
Store Worker I	$25.86	$26.64	$27.44	$28.26	$29.11
Supply Technician	$54.60	$56.24	$57.93	$59.66	$61.45
Survey Party Chief	$42.51	$43.78	$45.10	$46.45	$47.84
Surveying Aide	$24.94	$25.68	$26.45	$27.25	$28.07
Surveying Technician	$35.11	$36.17	$37.25	$38.37	$39.52
Telecommunications Mechanic I	$52.50	$54.07	$55.70	$57.37	$59.09
Telecommunications Mechanic II	$57.97	$59.71	$61.50	$63.34	$65.24
Tools and Parts Attendant	$33.21	$34.20	$35.23	$36.29	$37.37
Tractor Operator	$28.26	$29.11	$29.98	$30.88	$31.81
Truckdriver, Heavy	$42.73	$44.02	$45.34	$46.70	$48.10
Truckdriver, Light	$32.21	$33.17	$34.17	$35.19	$36.25
Truckdriver, Medium	$35.62	$36.69	$37.79	$38.92	$40.09
Truckdriver, Tractor-Trailer	$42.73	$44.02	$45.34	$46.70	$48.10

Labor Categories	Awarded GSA Hourly Rate				
	3/5/14 thru 3/4/15	3/5/15 thru 3/4/16	3/5/16 thru 3/4/17	3/5/17 thru 3/4/18	3/5/18 thru 3/4/19
Ventilation Equipment Tender	$30.31	$31.22	$32.16	$33.12	$34.12
Warehouse Specialist	$33.21	$34.20	$35.23	$36.29	$37.37
Water Treatment Plant Operator	$38.42	$39.57	$40.76	$41.98	$43.24
Welder, Combination, Maintenance	$36.78	$37.88	$39.02	$40.19	$41.40
Well Driller	$37.18	$38.30	$39.45	$40.63	$41.85
Woodcraft Worker	$42.77	$44.05	$45.37	$46.73	$48.13
Woodworker	$31.00	$31.93	$32.89	$33.88	$34.89