

EMPLOYEE:

CLAIM #



# Job Analysis Form

ALTERNATE FORMAT AVAILABLE

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**JOB TITLE** Electrician

**JOB CLASSIFICATION** Electrician I

**DICTIONARY OF OCCUPATIONAL TITLES (DOT) NUMBER** 824.261-010

**DOT TITLE** Electrician

**DEPARTMENT** Executive Services

**DIVISION** Facilities Maintenance

**# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE** 20

**CONTACT'S NAME & TITLE** Rick Foster, Interim Building Superintendant

**CONTACT'S PHONE** 206-295-8803

**ADDRESS OF WORKSITE**

MS RJC-ES-0007  
401 4<sup>th</sup> Ave. North  
Kent, WA 98032

**VRC NAME** Kyle Pletz

**DATE COMPLETED** 12/17/09

**WORK HOURS**

7:00AM-3:30pm or 2:00am-12:30am. Work is performed in a 24 hour per day, 365 day per year facility where work hours may vary in accordance with business demand.

**OVERTIME** (Note: Overtime requirements may change at the employer's discretion)  
Most overtime is optional but it is required on an emergency basis.

**JOB DESCRIPTION**

Performs skilled journey level work to maintain, repair, and upgrade a wide variety of equipment ranging from low voltage to high voltage AC and DC distribution switchgear, and to perform a comprehensive preventive maintenance program. Meets all requirements of the National Electrical Code, state and local standards

**ESSENTIAL ABILITIES FOR ALL KING COUNTY JOB CLASSIFICATIONS**

1. Ability to demonstrate predictable, reliable, and timely attendance.
2. Ability to follow written and verbal directions and to complete assigned tasks on schedule.
3. Ability to read, write & communicate in English and understand basic math.
4. Ability to learn from directions, observations, and mistakes, and apply procedures using good judgment.
5. Ability to work independently or part of a team; ability to interact appropriately with others.
6. Ability to work with supervision, receiving instructions/feedback, coaching/counseling and/or action/discipline.

## **JOB SPECIFIC REQUIREMENTS**

Must have two years of industrial or utility control experience. Must have knowledge of Washington State Confined Space guidelines, national electrical codes, trade terminology and procedures, principles of electrical distribution and generation, electrical troubleshooting and diagnosis, electrical test equipment, PLC/s motors and controls. Must have skill in preventative maintenance, skill in troubleshooting, running conduit and installing wire as well as using computers and computerized test equipment. Must possess a valid Washington State Driver's License and Washington State Lift Truck Certificate,. This position requires lifting and/or carrying objects up to 100 pounds with assistance.

## **ESSENTIAL FUNCTIONS**

1. Maintains and repairs switchgear and relays. Also installs, maintains and repairs electrical systems and equipment at King County facilities.
2. Maintains all electrical wiring on Parks properties in proper working order. Includes transformers, sewer pump controllers, stage lighting and audio, all types of single phase and three phase circuits for lighting and power with voltages up to 480 V DC.
3. Performs routine inspection and maintenance of facilities and their components, such as switches, transformers, diodes, fuses, relays, alternators, stationary batteries, charges etc.
4. Maintains and repairs emergency/auxiliary power plants, transfer switches and uninterrupted power supplies.
5. Maintains and repairs low voltage systems, such as security alarms, camera systems, network wiring, intercom and public address equipment, etc.
6. Evaluates existing equipment and provides recommendations regarding future electrical demands and costs.
7. Adheres to all prescribed safety procedures; safely operates and maintains power tools and test equipment.
8. Attend various electrical code classes and safety meetings in order to maintain continuing education credits for electrician licensing.

## **PERSONAL PROTECTIVE EQUIPMENT USED**

Gloves, knee protection, harnesses, ear protection, hard hat, steel toe safety shoes, respirator, gas monitoring unit, hearing protection, safety goggles and coveralls.

## **OTHER TOOLS & EQUIPMENT USED**

Various hand tools, electrical equipment cart, roto-hammer, hacksaw, pipe benders, tool belt, various electrical panels, shovel, forklift, batteries, breakers, light bulbs, electric motors, hardware such as screws and bolts, ladder, various lamps and fixtures, drill, spools of wire, bundles of conduit, boom truck, County van, tool bucket, power tools, cordless power tools, voltage sensors, shop vacuum, computer, junction boxes, various electrical parts, various electrical testing equipment, electric impact driver, hand truck, tri-stand, saws-all, cleaning solutions, splicer, extension lamp extractor, various two-way radios, telephone, meger for voltage leak or a good ground, fax machine, copy machine, voltage meter and boom lift/man lift.

### PHYSICAL DEMANDS AS JOB IS TYPICALLY PERFORMED

Continuously = occurs 66-100% of the time  
Frequently = occurs 33-66% of the time  
Occasionally = occurs 1-33% of the time  
Rarely = may occur less than 1% of the time  
Never = does not ever occur (such demands are not listed)

Highly Repetitive = Repeating the same motion every few seconds with little or no variation for more than two hours total per day.

### This job is classified as

Medium—exerting 20 to 50 pounds of force occasionally, and/or 10-25 pounds of force frequently, and/or up to 10 pounds of force constantly.

### Standing

Health Care Provider initials if restricted \_\_\_\_\_

Frequently on cement, dirt, gravel, linoleum, carpet and uneven surfaces for up to 1 hour at a time for up to 3-4 hours total in a work shift. Most commonly occurs while troubleshooting and wiring panels and electrical equipment.

### Walking

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally on cement, dirt, gravel, linoleum, carpet and uneven surfaces for distances for up to 400-500 yards for up to 15 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while traversing between buildings and work sites.

### Sitting

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally on an automobile seat, office chair or the ground for up to 1 hour at a time for up to 2 hours total in a work shift. Most commonly occurs while driving a County vehicle and working on equipment in low areas as well as when performing paperwork, ordering parts, performing bench work and reading manuals.

### Climbing stairs

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 2 minutes at a time while climbing up to 3 flights for up to 15 minutes total in a work shift. Most commonly occurs while inspecting electrical equipment in emergency stairwells and on the roof. The employee may carry equipment and tools up and down stairs.

### Climbing

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally on a ladder or vehicle to heights of 12 feet for up to 1 minute at a time for up to 30 minutes total in a work shift. Most commonly occurs while entering and exiting a truck, re-lamping and working on electrical equipment in high locations. The employee utilizes ladders to access electrical equipment in high locations, such as cameras, as well as rooftops.

**Balancing**

Health Care Provider initials if restricted \_\_\_\_\_

Continuously on uneven ground, booms, scissor lifts and ladders at heights of up to 50 feet for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while traversing on uneven ground and balancing on a ladder, scissor lift or boom truck when working on electrical systems and equipment. The employee needs to replace perimeter security lights which can be up to 50 feet high.

**Bending neck up**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 10 minutes at a time for up to 1.5 hours total in a work shift. Most commonly occurs while working on ceiling lights, perimeter lights and elevated equipment.

**Bending neck down**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 20-30 minutes at a time for up to 1.5 hours total in a work shift. Most commonly occurs while reading work orders, schematics, blueprints, wiring diagrams, manuals and drawings as well when working on equipment in low locations.

**Bending/Stooping**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently on cement, dirt, gravel, linoleum, carpet and uneven surfaces for up to 15 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs while performing preventative maintenance, troubleshooting and working on electrical systems or equipment, such as outlets, control panels and junction boxes in lower locations. The employee also may need to work on heavy equipment as well in order to splice wires. The employee can alternate bending/stooping with kneeling or squatting as preferred on most occasions.

**Kneeling**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently on cement, dirt, gravel, linoleum, carpet and uneven surfaces for up to 15 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs while performing preventative maintenance, troubleshooting and working on electrical systems or equipment, such as outlets, control panels and junction boxes in lower locations. The employee also may need to work on heavy equipment as well in order to splice wires. The employee can alternate kneeling with bending/stooping or squatting as preferred on most occasions.

**Squatting**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently on cement, dirt, gravel, linoleum, carpet and uneven surfaces for up to 15 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs while performing preventative maintenance, troubleshooting and working on electrical systems or equipment, such as outlets, control panels and junction boxes in lower locations. The employee also may need to work on heavy equipment as well in order to splice wires. The employee can alternate squatting with bending/stooping or kneeling as preferred on most occasions.

**Crawling**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally on cement, dirt, gravel, linoleum, carpet and uneven surfaces for distances of up to 50 feet for up to 5-10 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while inspecting the underside of electrical systems or machinery as well as when inspecting ballasts, vent motors and relays in areas such as an equipment chase.

**Operating Controls with Feet**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently for up to 45 minutes at a time for up to 5 hours total in a work shift while driving County vehicles, boom truck and high lift with an automatic transmission.

**Reaching above shoulder height**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently for up to 5 minutes at a time for up to 5 hours total in a work shift while re-lamping or rewiring ceilings or upper areas such as cameras and lighting.

**Reaching at waist to shoulder height**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently for up to 45 minutes at a time for up to 5 hours total in a work shift while driving a County vehicle and working on electrical systems and equipment as well as when reviewing documents and reference materials (manuals, schematics, blueprints, etc).

**Reaching at knee to waist height**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 15 minutes at a time for up to 2 hours total in a work shift while troubleshooting, repairing or maintaining electrical systems as well as pulling wire, replacing outlets, digging and working on junctions boxes.

**Reaching at floor to knee height**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 5 minutes at a time for up to 2 hours total in a work shift while troubleshooting, repairing or maintaining electrical systems as well as pulling wire, replacing outlets and working on junctions boxes.

**Lifting 1-10 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently for up to 30 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs with weights of 1-4 pounds while using various hand tools such as wire cutters, electrical testers and crimpers.

**Carrying 1-10 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for distances of up to 50 feet for up to 2 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 1-4 pounds while transporting hand tools to and from work sites and utility cart.

**Lifting 11-20 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 10 minutes at a time for up to 1.5 hours total in a work shift. Most commonly occurs with weights of 12-16 pounds while moving various pieces of electrical equipment, manipulating small batteries, manipulating fixtures and moving large spools of wire.

**Carrying 11-20 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for distances of up to 50 feet for up to 15 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 12-16 pounds while moving various pieces of electrical equipment, fixtures, spools of wire and power tools.

**Lifting 21-50 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 10 seconds at a time for up to 10 minutes total in a work shift. Most commonly occurs with weights of 30-40 pounds while using and manipulating pipe benders, tri-stand, motors, ballasts, larger batteries and power tools.

**Carrying 21-50 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for distances of up to 50 feet for up to 2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 30-40 pounds while transporting power tools, pipe benders, motors, larger batteries, ballasts, tri stand and various pieces of electrical equipment to and from work sites and the County van.

**Lifting 51-100 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Rare for up to 5 seconds at a time for up to 20 seconds total in a work shift. Most commonly occurs with a two-person lift of objects with weights of 51-70 pounds while loading or unloading various pieces of electrical equipment such as large batteries and light fixtures from a County van, hand truck or utility cart. Assistance is available for heavy lifting as is a come-along or chain fall to reduce the amount of lifting.

**Carrying 51-100 pounds**

Health Care Provider initials if restricted \_\_\_\_\_

Rare for distances of up to 10 feet for up to 30 seconds at a time for up to 1 minute total in a work shift. Most commonly occurs with a two-person lift of objects with weights of 51-70 pounds while loading or unloading various pieces of electrical equipment (exhaust and supply fans with motors, large batteries and large light fixtures) from a County van, hand truck or utility cart. Assistance is available for heavy lifting as is a come-along, hand cart, dolly or chain fall to reduce the amount of carrying.

**Pushing and Pulling**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 15 minutes at a time with a force of up to 120 pounds for up to 1 hour total in a work shift while regularly using a utility cart (15 pounds of pressure) as well as pulling up to 200 feet of wire through conduit.

**Handling**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently for up to 2 hours at a time for up to 4 hours total in a work shift while using various hand tools, driving, manipulating pipe and pulling wire.

**Operating Controls with Hands**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently for up to 1 hour at a time for up to 4 hours total in a work shift while driving a county vehicle with an automatic transmission, using a computer mouse, operating testing equipment, high lift, utilizing switches and using power tools.

**Fingering**

Health Care Provider initials if restricted \_\_\_\_\_

Frequently for up to 5 minutes at a time for up to 4 hours total in a work shift while using small hand tools, manipulating wires, manipulating small screws, performing CAT 5 wiring, performing testing/troubleshooting, using wire nuts and writing.

**Feeling**

Health Care Provider initials if restricted \_\_\_\_\_

Rare for 30 seconds at a time for up to 2 minutes total in a work shift while locating obscured wires as well as identifying overheating equipment or excessively vibrating machinery, such as an off-balance electrical motor.

**Talking**

Health Care Provider initials if restricted \_\_\_\_\_

Occasionally for up to 5 minutes at a time for up to 1 hour total in a work shift while conversing with co-workers, contactors and superiors when performing troubleshooting, using a 2-way radio or cell phone and participating in meetings.

**Hearing**

Health Care Provider initials if restricted \_\_\_\_\_

Continuously for up to 2.5 hours at a time for up to 8 hours total in a work shift while listening for proper machine operation, radio transmissions, cell phone, alarms, and training. The employee also utilizes hearing when troubleshooting with coworkers. The employee works in a correctional facility with exposure to inmates. Hearing is needed to identify potentially dangerous or harmful situations.

**Seeing**

Health Care Provider initials if restricted \_\_\_\_\_

Continuously for up to 2.5 hours at a time for up to 8 hours total in a work shift while looking for lamps in need of replacement and as well as driving a County vehicle, wiring and trouble shooting electrical equipment systems and machinery. The employee also uses vision to identify color of wires and sodium lamps as well as identify potential hazards such as electrocution potentials and moving machinery. Performing duties in a secure facility such as the Regional Justice Center or King County Correctional Facility requires constant use of vision for safety and security purposes.

**Working with Heightened Awareness**

Health Care Provider initials if restricted \_\_\_\_\_

Continuously for up to 2.5 hours at a time for up to 8 hours total in a work shift while identifying potential dangerous situations such as electrocution potential. Heightened awareness is also used when working at heights. Performing duties in a secure facility such as the Regional Justice Center or King County Correctional Facility requires constant use of vision for safety and security purposes.

**ENVIRONMENTAL FACTORS**

Work is predominantly performed indoors but can be performed outside in a variety of weather conditions or in confined areas. The worker is exposed to high voltage. Work is also performed in a correctional facility setting with indirect interaction with felon and misdemeanor inmates. Worker is exposed to potentially violent, intoxicated, and hostile inmates. Worker can be exposed to bodily fluids and biohazards on an rare basis. The noise level is quiet to very loud. The worker also works in to high and exposed places such as lift equipment up to 50 feet above the ground.

**The noise level is**

HCP Initials if Restricted

Approximately 50-110 decibels. The noise is caused by, mechanical rooms, diesel trucks.

**Work environment may include the following exposure(s):**

- Outside weather: Occasionally
- Non-weather related temperatures above 75 degrees: Occasionally
- Wet: Occasionally
- Humidity/dampness: Occasionally
- Fumes: Occasionally
- Odors: Frequently
- Dusts: Occasionally
- Mists: Rare-Occasionally
- Gases: Occasionally
- Moving mechanical parts: Frequently
- Vibration: Frequently
- Working in high, exposed places: Occasionally
- Confined spaces: Occasionally-Frequently

HCP Initials if Restricted


**POTENTIAL MODIFICATIONS TO JOB**

- A cart is available to reduce carrying.
- Lifting assistance is available for heavy lifting.
- Hoists, hand trucks, dollies and chain falls are available to reduce heavy lifting and carrying.

### SIGNATURES

Signatures on this page are obtained before the document becomes available for use and are not required each time the document is reused. Obtained signatures are kept on file at King County Safety & Claims. The Health Care Provider signature section is separate and appears on the following page.

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Printed name & title of VRC evaluator

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Signature of VRC evaluator

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Date

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Printed name & title of contact

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Signature of contact

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Date

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Printed name & title of employee

---

Signature of employee

---

Date

**HEALTH CARE PROVIDER SECTION**

Check all that apply

The employee is released to perform the described duties without restrictions on performance or work hours as of \_\_\_\_\_.

The employee is released to perform the described duties on a reduced schedule as of \_\_\_\_\_. The recommended schedule is:

Temporary until \_\_\_\_\_  Permanent as of \_\_\_\_\_

The employee is released to perform the described job with the following modifications:

Temporary until \_\_\_\_\_  Permanent as of \_\_\_\_\_

The employee is not released to perform the described duties due to the following job functions:

Temporary until \_\_\_\_\_  Permanent effective \_\_\_\_\_

The employee is unable to work in any capacity.  
A release to work is:  anticipated by \_\_\_\_\_  Not expected

The limitations are due to the following objective medical findings:

Printed or typed name and phone number of Health Care Provider

Signature of Health Care Provider

Date