

JOB TITLE: Traffic Signal Technician  
EMPLOYEE:

DOT #: 824.381-010  
CLAIM #



**King County**

## **KING COUNTY ON SITE JOB ANALYSIS**

**JOB TITLE** Traffic Signal Technician, Electrical

**JOB CLASSIFICATION** Traffic Signal Technician

**DOT TITLE** Traffic Signal Repairer

**DOT NUMBER** 824.381-010

**DEPARTMENT** Transportation

**DIVISION** Roads, Traffic

**# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE** 14

**JOB STATUS**

Full Time Career Service.

**ADDRESS OF WORKSITE**

155 Monroe Avenue Northeast  
Renton, WA 98056

**CONTACT'S NAME** Rick Thibodeau or Lindy Jensen

**CONTACT'S PHONE** (206) 296-8153 or (206) 205-7121

**EMPLOYER JOB TITLE** Traffic Signal Supervisor

**DATE COMPLETED** 8/21/02

**VRC NAME** Jeff Casem

**DATE REVISED** 5/13/09

**WORK HOURS**

7:00am to 3:30pm.

**OVERTIME**

Required on a rare occasion.

The employee is required to be on emergency call 10 weeks per year and is normally called in two to three times per week during that period. The employee is also scheduled to perform overtime three times per year.

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**King County Job Analysis Form Revised 11/9/01**

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Fair Labor Standards Act, Non-Exempt (hourly).

### **JOB DESCRIPTION**

The employee partakes in the construction and maintenance of traffic signal and street light systems. Assignments vary and all tasks are performed yearly but vary by season and needs. Two workers are assigned to work as a team with one truck. Driving and bucket work is shared.

### **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 judgement.
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**

Knowledge of electrical systems, electronic theory and trouble shooting skills. Knowledge of Line Worker and Utility Company standard and practices as well as knowledge of techniques, tools, equipment and procedures for working on energized circuits. Knowledge of construction principles and practices. Must possess skills in map reading, reading and interpreting electrical, civil plans and schematics. Ability to understand logic flow diagrams. Must possess computer skills.

### **ESSENTIAL FUNCTIONS Listed in order of importance**

1. Drive a 40-foot or 50-foot man lift truck and operate a lift bucket. May tow a pole trailer with up to 50-foot poles.
2. Sets up temporary traffic controls.
3. Documents work and equipment changes and submits daily material usage & requests.
4. Locates, reseals, repairs, or replaces vehicle & pedestrian detection systems.
5. Locates underground wiring and boxes for contractors.
6. Repairs and maintains wood and steel poles, energized overhead and underground cable, conduit and wiring system.
7. Replaces lamps.
8. Cleans and adjusts optical components of signals.
9. Performs maintenance and inspections of traffic signal hardware, wiring and cabling.
10. Installs wood poles, span wires, cables, conductors and electrical service equipment.
11. Performs safety operations when acting as the ground person.

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12. Installs or replaces oversize street signs.
13. Installs underground conduit and boxes.
14. Troubleshoots and repairs street lighting, electrical services and control cabinets.
15. Contacts the power company when needed.
16. Performs traffic control at work sites.
17. Operates a 15,000-pound forklift to load and unload material and equipment.
18. Installs video detection, microwave detections, cameras, and antennas.
19. Constructs and forms concrete forms and rebar cages.
20. Pours and finishes concrete.

### **NON-ESSENTIAL FUNCTIONS**

1. Performs contract electrical inspections of traffic devices.
2. Utilizes bucket truck to trim trees for road crews.
3. Works with Roads Division Electricians on the maintenance of bridge electrical systems.

### **TOOLS, MACHINES, EQUIPMENT, PRODUCTS, AND SERVICES USED**

Compactor, hydraulic tamper, spools of wire, conduit, auger, metal and wood poles, pipe, hand tools, signs, shovel, pick, bar and post hole digger, bucket lift truck, drill, compressor, pneumatic jackhammer, traffic cones, truck mounted trenching machine, earth boring tools, skid steer loader, hot melting sealant machine (bituminous and synthetic), 10,000-15,000 pound cranes, 15,000 pound forklift, mechanical wire pullers, concrete vibrators, reinforcing bar, bobcat (mini excavator), two-way radio, telephone, 22 caliber stud gun, benders, cutters, body harness and safety lanyard.

### **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

Rare = may occur less than 1% of the time

Never = does not ever occur (such demands are not listed)

### **This job is classified as**

Medium

### **Standing**

Frequently on cement gravel grass and dirt surfaces for up to 2.5 hours at a time for up to 4.5 hours total in a work shift. Most commonly occurs while working in the bucket of the bucket truck.

### **Walking**

Frequently on cement gravel grass and dirt surfaces for distances of up to 100 feet for up to 1 minute at a time for up to 5 hours total in a work shift. Most commonly occurs while setting up traffic control and sealing pavements.

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### **Sitting**

Continuously on an automobile seat for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while driving a bucket truck, ditch digger, skid steer loader and bobcat.

### **Climbing stairs**

Rare for up to 4 steps at a time and for up to 4 minutes total in a work shift. Most commonly occurs while in and out of the bucket truck.

### **Climbing**

Rare on a ladder to heights of up to 10 feet for up to 10 seconds at a time and up to 20 seconds total in a work shift. Most commonly occurs while using a ladder once per month when the work area is not accessible by a bucket truck.

### **Balancing**

Occasionally on a ladder at heights of up to 10 feet for up to 20 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while repairing or inspecting a traffic signal while on a ladder.

### **Bending/Stooping**

Frequently on cement gravel grass and dirt surfaces for up to 7 minutes at a time for up to 3.5 hours total in a work shift. Most commonly occurs while installing conduit and making assemblies. The employee may be able to alternate bending/stooping with crouching or kneeling.

### **Kneeling**

Occasionally on cement gravel grass and dirt surfaces for up to 5 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while installing conduit and making assemblies. The employee may be able to alternate kneeling with crouching or bending/stooping.

### **Crouching**

Frequently on cement gravel grass and dirt surfaces for up to 7 minutes at a time for up to 3.5 hours total in a work shift. Most commonly occurs while installing conduit and making assemblies. The employee may be able to alternate crouching with bending/stooping or kneeling.

### **Operating Controls with Feet**

Continuously for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while driving a bucket truck, ditch digger, skid steer loader and bobcat.

### **Reaching above shoulder height**

Frequently for up to 5 minutes at a time for up to 3 hours total in a work shift while performing lighting duties or re-lamping.

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**Reaching at waist to shoulder height**

Continuously on an automobile seat for up to 1 hour and 45 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs while driving a bucket truck, ditch digger, skid steer loader and bobcat.

**Reaching at knee to waist height**

Occasionally for up to 4 minutes at a time for up to 2 hours total in a work shift while wiring and operating the bucket controls as well as driving the ditch digger and the bobcat.

**Reaching at floor to knee height**

Frequently on cement gravel grass and dirt surfaces for up to 7 minutes at a time for up to 3.5 hours total in a work shift. Most commonly occurs while installing conduit and making assemblies.

**Lifting 1-10 pounds**

Frequently for up to 4 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs with weights of 3-5 pounds while using hand tools, conduit, wire spools, cabinets, and pipes as well as while digging.

**Carrying 1-10- pounds**

Occasionally for distances of up to 100 feet for up to 1 minute at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 3-5 pounds while transporting hand tools, conduit, wire spools, cabinets, and pipes to and from the work site.

**Lifting 11-20 pounds**

Occasionally for up to 2 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 13-16 pounds while lifting multiple hand tools and various materials.

**Carrying 11-20 pounds**

Occasionally for distances of up to 100 feet for up to 2.5 hours at a time for up to 7 hours total in a work shift. Most commonly occurs with weights of 12-14 pounds while wearing a tool belt. The employee is not required to wear the tool belt at all times.

**Lifting 21-50 pounds**

Occasionally for up to 1 minute at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 30 pounds while moving light fixtures, pieces of concrete, bags of cement and toolboxes.

**Carrying 21-50 pounds**

Occasionally for distances of up to 100 feet for up to 1 minute at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 30 pounds

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while moving light fixtures, pieces of concrete, bags of cement and toolboxes to and from the work site and truck.

**Pushing and Pulling**

Occasionally for up to 5 minutes at a time for distances of up to 100 feet with a force of 30-50 pounds for up to 2.5 hours total in a work shift while pulling wires through conduit.

**Handling**

Continuously for up to 2 hours at a time for up to 6 hours total in a work shift while using hand tools.

**Operating Controls with Hands**

Continuously for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while driving a bucket truck, ditch digger, skid steer loader and bobcat.

**Fingering**

Occasionally for up to 5 minutes at a time for up to 2 hours total in a work shift while wiring and completing paperwork.

**Feeling**

Occasionally for up to 1 minute at a time for up to 1 hour total in a work shift while feeling for obstructed wires, overheating electrical systems as well as performing illumination duties.

**Talking**

Occasionally for up to 5 minutes at a time for up to 2 hours total in a work shift while conversing with co-workers.

**Hearing**

Continuously for up to 2.5 hours at a time for up to 6 hours total in a work shift while listening for hazards such as moving vehicles and machinery.

**Tasting/Smelling**

Rare for up to 1 minute at a time for up to 5 minutes total in a work shift while smelling for electrical malfunctions.

**Near acuity—clarity of vision at 20 inches or less**

Frequently for up to 20 minutes at a time for up to 3.5 hours total in a work shift while wiring, reading gauges, and troubleshooting.

**Far acuity—clarity of vision at 20 feet or more**

Continuously for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while driving a bucket truck, ditch digger, skid steer loader and bobcat.

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**Depth perception—three dimensional vision**

Continuously for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while driving a bucket truck, ditch digger, skid steer loader and bobcat.

**Color vision—ability to identify and distinguish colors**

Continuously for up to 2.5 hours at a time for up to 7 hours total in a work shift while identifying the colors of the traffic lights as well as the colors of the electrical wires.

**Field of vision—observing an area that can be seen up and down or right or left while eyes are fixed on a given point**

Continuously for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while driving a bucket truck, ditch digger, skid steer loader and bobcat.

**Night vision--seeing after sundown with minimal or no supplemental light sources**

Occasionally for up to 2 hours at a time for up to 2 hours total in a work shift while working before sunrise or after sunset during winter months.

**TEMPERAMENTS**

Directing, controlling, or planning activities of others: Occasionally  
Performing repetitive or short-cycle work: Continuously  
Performing a variety of duties: Continuously  
Working effectively under stress: Occasionally  
Attaining precise set limits, tolerances, and standards: Continuously  
Working under specific instructions: Frequently  
Working with others: Continuously  
Making judgments and decisions: Frequently

**ENVIRONMENTAL FACTORS**

Work is performed in an outdoor setting with exposure to moving automobiles, chemical fumes and road dust. The employee can be exposed to hazardous chemicals and gasses when a mercury lamp or sodium lamp is broken. The noise level is loud.

**Workers are exposed to**

Outside weather: Continuously  
Extreme cold: Occasionally  
Extreme heat: Occasionally  
Wet: Occasionally  
Humidity/dampness: Occasionally  
Fumes: Frequently  
Odors: Frequently  
Dusts: Frequently

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Mists: Occasionally  
Gases: Rare  
Poor ventilation: Rare  
Moving mechanical parts: Continuously  
Vibration: Frequently  
Working in high, exposed places: Frequently  
Working with explosives: Rare  
Toxic or caustic chemicals: Rare

**POTENTIAL MODIFICATIONS TO JOB**

Alternate body positions to reduce static postures.

\_\_\_\_\_  
Signature & title of evaluator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature & title of contact

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature & title of employee

\_\_\_\_\_  
Date

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**HEALTH CARE PROVIDER SECTION**  
Check all that apply

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

The employee is released to perform the described duties on a reduced schedule. 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