# Job Analysis Form ALTERNATE FORMAT AVAILABLE

JOB TITLE Lineman

# JOB CLASSIFICATION Lineman

## DICTIONARY OF OCCUPATIONAL TITLES (DOT) NUMBER 821.361-018

DOT TITLE Line Erector

DEPARTMENT Transportation DIVISION Transit

## **# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE 11**

CONTACT'S NAME & TITLE Mark McKeown, Chief of Power

**CONTACT'S PHONE** 206-263-4604

# ADDRESS OF WORKSITE

2255 4<sup>th</sup> Ave. S. Seattle, WA 98134

VRC NAME Kyle Pletz

DATE COMPLETED 3/22/02

VRC NAME Jeff Casem

# DATE REVISED 5/18/09

## WORK HOURS

Monday through Friday, Tuesday through Saturday, Sunday through Thursday. Day (8:00am-4:30pm), Swing (4:00pm-12:00am), and Graveyard (4:00am-12:00pm) shifts exist with one 30 minute lunch break and two 15 minute breaks.

**OVERTIME** (Note: Overtime requirements may change at the employer's discretion) Optional and varies depending on the season. Optional on most occasions, but can be required in emergency situations.

# JOB DESCRIPTION

Perform journey level work in the construction and maintenance of the trolley overhead and underground systems. Electrical systems (750 volts DC) are energized during construction and maintenance activities. May lead others within the same trade, material workers and helpers, on a temporary basis for specific projects.

# 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

Completion of a line worker apprenticeship and two years of experience as a journey level line worker is required. Demonstrated ability to read, write, and follow verbal instructions is required. Ability to work as a team member. Ability to problem solve. A Washington State driver's license or alternate ability to travel throughout the County in a timely manner and during non-business hours is required. The employee is required to climb poles and work from elevated equipment. The worker is frequently required to lift objects weighing up to 50 pounds in an elevated position.

## **ESSENTIAL FUNCTIONS**

- 1. Sets and guys all types of poles; assembles and fastens cross-arms, brackets, mast arms and related hardware.
- 2. Strings wires and cables for electrical power distribution systems and transit power circuits or control circuits.
- 3. Installs and maintains overhead trolley lines; tests, troubleshoots and repairs defective circuits.
- 4. Splices wires and cables and installs conductors in conduit or overhead wiring.
- 5. Trims trees in close proximity to overhead lines.
- 6. Installs, maintains, and repairs intersection tracks, directional, power and induction switches, sectional circuit breakers, crossovers, and other overhead trolley equipment.
- 7. Performs inspection, maintenance and service on the rails and switch gear.
- 8. Performs related work as assigned by the supervisor.

# PERSONAL PROTECTIVE EQUIPMENT USED

Head protections, safety vest, gloves (high and low voltage), harness, belts, ear protection, eye protection, leather footwear, escape respirator, knee pads, and insulating blankets.

## **OTHER TOOLS & EQUIPMENT USED**

Cable, tower truck, hoisting devices, hand tools, wood and steel poles, chain saw, cranes, shovels, digging bars, jackhammer, digger truck, auger, pole puller, spoon and spades, pry bar, ratchets, anvil, hammer, various hand tools, belt and hooks for climbing poles, man lift, ladder, various testers, high pots, shivs, blocks, torch, pumps, air monitor, locator, flag stands, signs, crimpers, heater, generators, cutters, battery cutters and ratcheting cutters.

## 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.

Standing Continuously on concrete/asphalt/wood surfaces for up to 30 minutes at a time for up to 6 hours in a work shift. Most commonly occurs while workers perform job duties in the tower truck as well as when performing safely watch, testing and inspecting duties. The employee also stands while assembling or wiring switches.

Very Heavy-exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of

# Walking

This job is classified as

Frequently on hard surfaces for distances of 600 feet, generally 10 feet on tower, for up to 5-10 minutes at a time for up to 5.5 hours total in a work shift. Most commonly occurs while repairing, installing, or troubleshooting trolley systems when on a tower. The employee also walks when traversing between the work site and work truck as well as when performing inspections.

# Sitting

Occasionally on a seat in the truck for up to 30 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while driving to job sites in a truck.

# **Climbing stairs**

Occasionally for up to 30 seconds at a time while climbing stairs of one flight for up to 15 minutes total in a work shift. Most commonly occurs while accessing/exiting tower on tower truck as well as when traversing within the shop.

# Climbing

Health Care Provider initials if restricted Occasionally on tower truck to heights of 10-12 feet for up to 1 minute at a time for up to 30 minutes total in a work shift. Most commonly occurs while entering/exiting tower of tower truck and accessing ladders. Must also be able to climb out of vaults up to 20 feet deep using a ladder. The employee also climbs poles on an emergency basis.

# Balancing

Health Care Provider initials if restricted

Frequently to continuously on a tower truck at heights of 10-25 feet for up to 2.5-3 hours at a time for up to 5-6 hours total in a work shift. Most commonly occurs while working on the tower truck in a lift bucket performing line installations, trouble shooting, testing and maintenance.

# Bending neck up

Health Care Provider initials if restricted Frequently to continuously & Highly Repetitive for up to 2.5-3 hours at a time for up to 5-6 hours total in a work shift. Most commonly occurs while performing overhead work on the deck as well as inspecting lines.

# Bending neck down

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. Most commonly occurs while working on hoists.

# Health Care Provider initials if restricted

Health Care Provider initials if restricted

Health Care Provider initials if restricted

#### Bending/Stooping

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

Occasionally on concrete, asphalt and wood surfaces for up to 15 minutes at a time for up to 2 hours total in a work shift. Most commonly occurs while worker is bent forward at the waist to crank the chain hoist to raise tension on wires. Worker may perform this task for 5 minutes then rest for about 5 minutes and then repeat until the tension is set. Occasionally bend while creating a 3 to 8 foot hole by hand using spoon and spades (shovel) that are 12 to 14 feet long to break cement and create a large hole. The employee also bends or stoops when working with a partner in a hole as well as when looking over the edge of a bucket or deck rail at helpers on the ground.

### Kneeling

Health Care Provider initials if restricted\_

Occasionally on concrete, asphalt and wood surfaces for up to 5 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while working on the tower and performing installations, maintenance and testing as well as when assembling switches on the tower.

## Squatting

Occasionally on hard fiberglass surfaces for up to 2 minutes at a time for up to 1-1.5 hours total in a work shift. Most commonly occurs while moving about in tower truck while performing job duties. Worker must also crouch while installing cable in vaults which may be up to 20 feet deep.

## Crawling

Rare on concrete, asphalt and wood surfaces for distances of 10-20 feet for up to 2 minutes at a time for up to 10 minutes total in a work shift. Most commonly occurs while crawling under equipment while in a tower truck or when working on the deck.

## **Operating Controls with Feet**

Health Care Provider initials if restricted Occasionally to operate tower truck for 2 minutes at a time for up to 30 minutes total in a work shift while operating the controls on the tower, using the Y-35 hydraulic crimper foot pedal. On a rare to occasional basis the employee may drive for up to 30 minutes at a time for up to 1 hour total in a shift.

# Reaching above shoulder height

Frequently to continuously & Highly Repetitive for up to 5 minutes at a time for up to 3-6 hours total in a work shift while working with tools and equipment above shoulder. Worker will perform this task until the tension is set on wires while reaching overhead and away from body to crank chain hoist, exerting up to 100 pounds of force to raise tension on wires. Working with high voltage lines and performing work that is 80% over head to eye level. While installing overhead hardware (cam tips), worker will perform up to 1 hour of overhead hammering with a 20-pound anvil.

# Reaching at waist to shoulder height

Health Care Provider initials if restricted

Health Care Provider initials if restricted

Frequently to continuously & Highly Repetitive for up to 2 minutes at a time for up to 3-6 hours total in a work shift while handling tools in tower truck and on ground to perform many job duties. Workers reach out 4-8 times to place grips on wires and again, 4-8 times to put on hoists, then several times side to side to place tension on wires. On a rare to occasional basis the employee may drive for up to 30 minutes at a time for up to 1 hour total in a shift.

> PAGE 4 KCJA Template rev. 6/8/05

# Health Care Provider initials if restricted

Health Care Provider initials if restricted

#### Reaching at knee to waist height

Health Care Provider initials if restricted\_

Health Care Provider initials if restricted

Health Care Provider initials if restricted

Health Care Provider initials if restricted

Occasionally & Highly Repetitive for a few seconds to up to 3 minutes at a time for up to 2.5 hours total in a work shift while retrieving tools and materials at lower levels as well as when shoveling and assembling switches.

Reaching at floor to knee height

Occasionally for up to 30 seconds at a time for up to 30 minutes total in a work shift while retrieving tools and material at lower levels as well as when setting up the platform 6 times per shift.

### Lifting 1-10 pounds

Continuously & Highly Repetitive of tools for up to 2 minutes at a time for up to 4-6 hours total in a work shift. Most commonly occurs with weights of 8 pounds while hitting the anvil with a hammer to remove the kinks from the trolley wire, as well as the 8 pound grips while working on overhead wires and equipment as well as when using various hand tools. The employee can choose to wear a tool belt which would require lifting for up to 2-3 hours at a time for up to 4-6 hours total in a shift.

### Carrying 1-10 pounds

Health Care Provider initials if restricted\_ Occasionally of personal tools for distances of up to 100 feet for 1 minute at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 8 pounds while carrying personal tools around work site. The employee can choose to wear a tool belt which would require carrying for up to 2-3 hours at a time for up to 4-6 hours total in a shift.

### Lifting 11-20 pounds

Occasionally of tools and equipment for 2-10 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 20 pounds while holding an anvil overhead with trolley wire running through the top of it and hitting it with a hammer, lifting hoists, and various tools and equipment. The employee can choose to wear a tool belt which would require lifting for up to 2-3 hours at a time for up to 4-6 hours total in a shift.

### Carrying 11-20 pounds

Health Care Provider initials if restricted Occasionally of hoists, anvils, cutters, tools and equipment 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 20 pounds while utilizing tools and equipment back and forth onto tower truck. The employee can choose to wear a tool belt which would require carrying for up to 2-3 hours at a time for up to 4-6 hours total in a shift.

### Lifting 21-50 pounds

### Health Care Provider initials if restricted

Occasionally to frequently & Highly Repetitive for up to 10-15 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs with weights of 23-50 pounds to operate a chain saw (30 pounds) while trimming trees, move trolley hardware (up to 50 pounds), and using hoists and cutters (23 pounds) as well as to maneuver up to 50 pounds while setting poles.

#### Carrying 21-50 pounds

Health Care Provider initials if restricted\_

Health Care Provider initials if restricted

Health Care Provider initials if restricted\_

Occasionally of hoists, tools, anvil for distances of up to 100 feet for 2-3 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 30-50 pounds while setting poles and replacing trolley hardware as well as when hauling tools and materials to and from the truck.

#### Lifting 51-100 pounds

Occasionally of 90 pound jack hammer and switches for 1-2 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 60-80 pounds while balancing the crossovers, switches, etc. while they are being installed in the wire at 18'6" to 19'6" in the air. Help is available on most occasions for these duties.

### Carrying 51-100 pounds

Occasionally of 90 pound jack hammer and switches up to 25 feet for 1 minute at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 60-80 pounds while replacing and installing trolley hardware as well as when repetitively lifting a jackhammer for 1-2 hours at a time.

#### Lifting 100+ pounds

#### Health Care Provider initials if restricted

Rare of switches, bags of sand and asphalt for up to 1 minute at a time for up to 10 minutes total in a work shift. Most commonly occurs with weights of 150 to 170 pounds while pulling poles and lifting switches from the ground to the deck on the tower truck. These duties do not happen on a daily basis and help is available on most occasions for these duties.

### Carrying 100+ pounds

Health Care Provider initials if restricted Rare of switches, bags of sand and asphalt for distances up to 25 feet for up to 2 minutes at a time for up to 10 minutes total in a work shift. Most commonly occurs with weights of 150 to 170 pounds while loading switches and maneuvering poles. These duties do not happen on a daily basis and help is available on most occasions for these duties.

### **Pushing and Pulling**

Health Care Provider initials if restricted Frequently of chain hoists with a force of up to 80-100 pounds for up to 10-15 minutes at a time for up to 1-2 hours total in a work shift while cranking the chain hoists to raise tension on wires. Pulling up switches from ground level to tower truck with a force of 100+ pounds for distances of 14 feet, from ground level to tower truck, for 1 minute at a time for up to 5-6 minutes total in a work shift. The employee also cranks a hoist for up to 10-15 minutes at a time with up to 30 pounds of force for up to 1-2 hours total in a shift. Worker also handles cable that is up to 1 inch in diameter weighing 3 pounds per foot and may pull up to 100 pounds for up to 1 minute at a time. Cable is most commonly pulled into vaults and conduits with power winches. Cable is racked on the walls of the vaults by Employee. Cable has to be shaped and bent using wrenches and crimpers. May have to splice wires as well. On a very rare occasion the employee may need to push or pull with up to 150 pounds of force to manipulate materials.

#### Handling

#### Health Care Provider initials if restricted

Continuously & Highly Repetitive while grasping and torguing with anvil and hoists for up to 5-10 minutes at a time for up to 6 hours total in a work shift while pounding out kinks in wire and putting tension on wire, manipulating materials, using a chainsaw, using a hoist and using various hand tools.

#### Operating Controls with Hands

Occasionally for up to 2 minutes at a time for up to 30 minutes total in a work shift while operating tower truck lift controls.

### Fingering

Occasionally while repairing switches of small parts for up to 2 minutes at a time for up to 2 hours total in a work shift while repairing switch mechanisms and building rebar cages.

### Feeling

Frequently of material and tools for a total of 4 hours in a work shift. Most commonly occurs while feeling for hidden bolts, nuts and equipment as well as when identifying equipment malfunction and utilizing/manipulating small parts.

## Talking

Occasionally for up to 2 minutes at a time with the Foreman on the ground level for up to 1-2 hours total in a work shift while obtaining instructions and plans as well as when communicating with the work partner when working on live lines.

## Hearing

Health Care Provider initials if restricted\_ Continuously for up to 8 hours at a time during work shift while listening to traffic, co-workers, supervisor, and/or pedestrians while performing all job duties.

### Seeing

Health Care Provider initials if restricted Continuously for up to 3-4 hours at a time for up to 8 hours total in a work shift while completing tasks in tower truck, watching for trolley buses and cars, working on live lines, completing safety checks, flagging, viewing traffic signs, viewing color coded equipment, watching for job hazards and watching coworkers for safety purposes.

### Working with Heightened Awareness

Health Care Provider initials if restricted Continuously for up to 3-4 hours at a time for up to 8 hours total in a work shift while working on live lines and identifying potential hazards such as moving machinery and electrocution potential.

## **ENVIRONMENTAL FACTORS**

Work is performed outdoors in all types of weather. The work is also performed in close proximity to moving traffic and high voltage wires. Work is performed on energized lines.

### The noise level is

**HCP** Initials if Restricted

Approximately 90 decibels. The noise is caused by trucks and power tools.

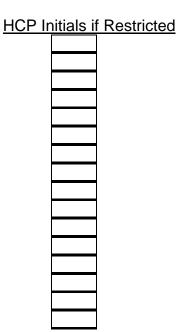
PAGE 7 KCJA Template rev. 6/8/05

Health Care Provider initials if restricted

KING COUNTY JOB ANALYSIS COMPLETED O	N: 9/7/05
JOB TITLE: Lineman	DOT #: 821.361.081
EMPLOYEE:	CLAIM #

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

Outside weather: Continuously Non-weather related temperatures below 55 degrees: Occasionally Non-weather related temperatures above 75 degrees: Occasionally Wet: Occasionally Humidity/dampness: Occasionally Fumes: Occasionally to Frequently Odors: Occasionally **Dusts: Occasionally** Mists: Occasionally Gases: Rare Moving mechanical parts: Occasionally to Frequently Vibration: Occasionally Working in high, exposed places: Continuously Toxic or caustic chemicals: Occasionally Confined spaces: rare Other:



#### POTENTIAL MODIFICATIONS TO JOB

### 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.

Kyle Pletz, VRC, Vocational Consultant	
Printed name & title of VRC evaluator	
Signature of VRC evaluator	Date
Printed name & title of contact	
Signature of contact	Date
Printed name & title of employee	
Signature of employee	Date

	KING COUNTY JOB ANALYSIS COMPLETED ON: 9/7/05 JOB TITLE: Lineman DOT #: 821.361.081 EMPLOYEE: CLAIM #		
	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:		
Print	ed or typed name and phone number of Health Care Provider		

Signature of Health Care Provider

Date