

EMPLOYEE:

CLAIM #



## Job Analysis Form

ALTERNATE FORMAT AVAILABLE

**JOB TITLE** Engineer I

**JOB CLASSIFICATION** Engineer I

**DICTIONARY OF OCCUPATIONAL TITLES (DOT) NUMBER** 199.167-022

**DOT TITLE** Environmental Analyst

**DEPARTMENT** Transportation

**DIVISION** Roads Services

**# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE** 1

**CONTACT'S NAME & TITLE** Jon Cassidy, Maintenance Engineering manager.

**CONTACT'S PHONE** 206-296-8148

**ADDRESS OF WORKSITE**

155 Monroe Ave NE, Bldg. C  
Renton, WA 98055-4199

**VRC NAME** Kyle Pletz

**DATE COMPLETED** 6/9/09

**WORK HOURS**

40 hours per week, with flexible hours (8 hour or 10 hour shifts), Monday through Friday.

**OVERTIME** (Note: Overtime requirements may change at the employer's discretion)

Required, on occasion approximately 8-10 hours per month, in accordance with business demand.  
Required overtime is more common during the winter months (November through March).

**JOB DESCRIPTION**

The Engineer I position will provide technical engineering expertise and support to Division and Section management in support of plans, policies, programs and projects. Approximately 60% of the work is performed in an office setting and the remaining 40% of the work is performed in the field.

**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**

- Knowledge of engineering and environmental science, drainage calculations and hydrologic design software, and surveying, equivalent to a Bachelor of Arts degree or higher and a minimum two (2) years of progressively responsible experience in one or more of the following areas: project design, environmental planning, research, construction and monitoring.
- Knowledge of local/state/federal environmental regulations and review processes; knowledge of local/state/federal permitting processes; emphasis on transportation project design and construction.
- Advanced knowledge of AutoCAD including a minimum of 2 years experience.
- Advanced knowledge of computer software including, Microsoft Word, Excel, Outlook, Access, and PowerPoint.
- Good verbal and written communication skills.
- Skill in reading and interpreting plans, specifications, drawings, and technical maps and documents.
- Skill in analyzing and interpreting technical data including performing routine statistical analysis.
- Skill in applying principles of customer service and continuous quality improvement including ability to coordinate with staff and other agencies.
- Skill in independent and group problem solving and decision-making.
- Ability to work under tight deadlines.
- Ability to perform fieldwork under varying and adverse working conditions including heavy rain and extreme temperatures.
- Ability to work effectively as part of a diverse team of engineers, environmental experts, and construction crews.
- Ability to have reliable and predictable attendance.
- Valid Washington State Driver's License.
- Current flagger certification card or the ability to obtain one.
- Employment is contingent on the success of a pre-employment physical examination.

## **ESSENTIAL FUNCTIONS**

- Prepare civil engineering design plans using computer aided drafting (AutoCad).
- Assists in hydraulic calculation and basin delineation.
- Assists in performing cut and fill calculations.
- Assists in survey work.
- Perform data entry from both electronic and hardcopy media; collate, retrieve and analyze GIS or collected data for engineering and design studies, and related projects.
- Update and maintain the Unit's database and develops reports.
- Perform general office support and maintain records for assigned work unit, which includes implementation of quality control programs.
- Edits and drafts plans and bid specifications.
- Edits and updates work programs.
- Performs environmental monitoring.
- Other engineering duties as assigned.

### **PERSONAL PROTECTIVE EQUIPMENT USED**

Safety boots, gloves, ear protection, eye protection, hard hat, safety vest, rain gear, leggings, chaps, and knee pads.

### **OTHER TOOLS & EQUIPMENT USED**

County vehicle (pickup truck with canopy), computer, telephone, fax machine, copy machine, machete, survey equipment, level, rod, lid puller, 2.5 pound hammer, hex wrench, digging bar, shovel, safety cones, signs, flagging paddle, mirror, flashlight, tape measure, walking wheel, Digital Measuring Instrument (DMI), paper cutter, loppers, compass, basic hand tools, rope, hip waders/hip boots/rubber boots/chest waders, documents, plans, specifications, maps, reference materials and contracts.

### **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 \_\_\_\_\_

Occasionally to frequently on dirt, gravel, cement, construction sites, concrete, stream bed, mossy boulders, wet ditches, steep slopes, thick vegetation, wet, slick, frozen and uneven ground surfaces for up to 1 hour at a time for up to 2-3 hours total in a work shift. Most commonly occurs while flagging, surveying with level and a rod, and site investigations while in the field.

### **Walking**

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

Frequently on dirt, gravel, cement, construction sites, concrete, stream bed, mossy boulders, wet ditches, steep slopes, thick vegetation, wet, slick, frozen and uneven ground surfaces for up to 30 minutes (2.5-3 miles) at a time while traversing to and from various sites (2.5-3 miles) for up to 6 hours total in a work shift. Most commonly occurs while surveying with a level and a rod, construction inspections and site investigations, while in the field.

### **Sitting**

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

Continuously on an automobile seat or office chair for up to 2 hours at a time for up to 8-10 hours total in a work shift (during 10 hours shifts). Most commonly occurs while driving, performing computer duties, attending meetings, attending trainings, reviewing reference materials, reviewing files, reading plans, etc. The employee may need to drive to locations such as Skykomish and Vashon Island (which includes riding on a ferry) which can take as long as two hours.

### **Climbing stairs**

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

Rarely while climbing up to 20 steps at a time for up to 5 minutes total in a work shift. Most commonly occurs while conducting field investigations (vertical steps), entering/exiting job trailers, traversing right-of-ways, performing pathway projects or attending meetings at various King County locations.

### **Climbing**

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

Occasionally for up to 30' at a time for up to 30-60 minutes total in a work shift. Most commonly occurs while using ladders as well as traversing steep slopes, excavation areas, fill slopes, thick vegetation, piles of debris, in/out of culvers construction areas, in/out of trenches, etc.

### **Balancing**

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

Frequently on dirt, gravel, construction sites, concrete, stream bed, mossy boulders, wet ditches, steep slopes, thick vegetation, wet, slick, frozen and uneven ground surfaces for up to 2 hours at a time for up to 6 hours total in a work shift. Most commonly occurs while performing field investigations which include working on the edge of sink holes, ditches, head walls, rockeries, streams etc. The employee also works in areas that may be wet/slick (in streams), in thick vegetation, on steep slopes etc. when performing field duties.

### **Bending neck up**

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

Occasionally to frequently and highly repetitive for up to up to 1-2 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs while performing surveying duties, inspecting culverts and using a surveying rod around overhead power lines and trees as well as looking up while in ditches, pits, etc. The employee also bends the neck up when obtaining items on upper shelves in the office.

### **Bending neck down**

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

Frequently for up to 30 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs while performing field inspections as well as reviewing/drafting plans, reading, writing and typing.

### **Bending/Stooping**

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

Occasionally for up to 1-5 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while reaching for low files as well as performing site investigations, measuring invert elevation (IE's), looking in to pipes and driving stakes. The employee can alternate with kneeling or squatting in accordance with personal preference.

### **Kneeling**

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

Occasionally for up to 1-5 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while reaching for low files as well as performing site investigations, measuring invert elevation (IE's), looking in to pipes and driving stakes. The employee can alternate with bending/stooping or squatting in accordance with personal preference.

### **Squatting**

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

Occasionally for up to 1-5 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while reaching for low files as well as performing site investigations, measuring invert elevation (IE's), looking in to pipes and driving stakes. The employee can alternate with kneeling or bending/stooping in accordance with personal preference.

**Crawling**

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

Rarely to occasionally for up to 100 feet for up to 5 minutes at a time for up to 10 minutes total in a work shift. Most commonly occurs while traversing pipes or thick vegetation.

**Operating Controls with Feet**

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

Frequently for up to 2 hours at a time for up to 5 hours total in a work shift while driving a County vehicle to various locations in King County such as Vashon Island (requires ferry ride) and Skykomish. These drives can take as long as two hours, but the employee has the ability to break up the drives to reduce continuous sitting.

**Reaching above shoulder height**

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

Occasionally for up to 1 minute at a time for up to 30-60 minutes total in a work shift while reaching for items on upper shelves as well as stabilizing a 25 foot surveying rod in windy conditions.

**Reaching at waist to shoulder height**

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

Continuously for up to 2 hours at a time for up to 8 hours total in a work shift while driving, typing, writing, manipulating documents, using a machete, manipulating brush, performing surveying duties and reviewing plans. On a rare occasion the employee may need to reach at waist to shoulder height for up to 2 hours at a time for up to 4 hours total in a shift while driving to Skykomish.

**Reaching at knee to waist height**

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

Rarely for up to 30 seconds at a time for up to 2-3 minutes total in a work shift while opening and closing drawers, pulling catch basin lids, investigating pipes, using walking wheel, using a shovel and picking up stakes. The employee can utilize a chair when filing.

**Reaching at floor to knee height**

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

Occasionally for up to 1-5 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs while reaching for low files as well as performing site investigations, measuring invert elevations (IE's), looking in pipes and driving stakes.

**Lifting 1-10 pounds**

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. Most commonly occurs with weights of 3-6 pounds while manipulating plans, hammer, blue prints, traffic cones, rod, shovel, rag tape, files, reference materials, etc.

**Carrying 1-10 pounds**

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

Frequently for up to 10 minutes at a time for up to 3-4 hours total in a work shift. Most commonly occurs with weights of 3-6 pounds while transporting and/or manipulating plans, hammer, blue prints, traffic cones, rod, shovel, rag tape, files, reference materials, etc.

**Lifting 11-20 pounds**

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

Occasionally for up to 1-2 minutes at a time for up to 30 minutes total in a work shift. Most commonly occurs with weights of 15-20 pounds while manipulating tripod and multiple pieces of equipment (such as spray paint, rods, measuring tape, etc.).

### **Carrying 11-20 pounds**

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

Occasionally for up to 2-3 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of 15-20 pounds while transporting tripod and multiple pieces of equipment (such as spray paint, rods, measuring tape, etc.). It is noted that this carrying is performed on all conceivable surfaces including dirt, gravel, cement, construction sites, concrete, stream bed, mossy boulders, wet ditches, steep slopes, thick vegetation, wet, slick, frozen and uneven ground.

On a rare occasion the employee may need to carry up to 20 pounds up to 2.5-3 miles in and out to a remote site for up to 5 hours in a shift.

### **Lifting 21-50 pounds**

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

Occasionally for up to 1 minute at a time for up to 10 minutes total in a work shift. Most commonly occurs with weights of up to 50 pounds while manipulating digging bar, sign/tripod and manhole lids (pull up one side off the ground and then slide off of hole). The employee also lifts 21-50 pounds while loading multiple pieces of equipment.

### **Carrying 21-50 pounds**

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

Occasionally for up to 30-60 seconds at a time for up to 20 minutes total in a work shift. Most commonly occurs with weights of 25-50 pounds while transporting a digging bar or multiple pieces of equipment.

On a rare occasion the employee may need to carry up to 25 pounds up to 2.5-3 miles in and out to a remote site for up to 5 hours in a shift.

### **Pushing and Pulling**

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

Rarely with a force of up to 50 pounds for up to 5 seconds at a time for up to 5 minutes total in a work shift while opening and closing drawers and doors (2-5 pounds) as well as when manipulating grates/manhole lids (50 pounds). The employee also pushes/pulls when manipulating equipment such as signs or tripods in/out of truck or when using a shovel

### **Handling**

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

Frequently for up to 2 hours at a time for up to 6 hours total in a work shift while driving as well as manipulating equipment flashlight, rod, hammer, clipboard/pad, tripod, digging rod, cones, paint can, reference materials, binders, etc. On a rare occasion the employee may need to drive for up to 2 hours at a time for up to 4 hours total when going to Skykomish or Vashon Island.

### **Operating Controls with Hands**

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

Continuously for up to 2 hours at a time for up to 8 hours total in a work shift while driving as well as using a computer mouse, level, survey equipment and computer (AutoCAD). On a rare occasion the employee may need to drive for up to 2 hours at a time for up to 4 hours total when going to Skykomish or Vashon Island.

### **Fingering**

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

Continuously and highly repetitive for up to 1 hour at a time for up to 8 hours total in a work shift while typing, writing and manipulating documents, clicking the mouse and performing data entry.

**Feeling**

Health Care Provider initials if restricted

Frequently for up to 2 minutes at a time for up to 4 hours total in a work shift while feeling resistance of wind or elements on the rod while trying to hold it vertical.

**Talking**

Health Care Provider initials if restricted

Occasionally for up to 5-10 minutes at a time for up to 1-2 hours total in a work shift while conversing with coworkers when performing duties such as surveying as well as when discussing work duties. The employee must be able to speak in a loud voice so that they can be heard over moving traffic and construction equipment. The employee also talks when participating in meetings, trainings and presentations.

**Hearing**

Health Care Provider initials if restricted

Continuously for up to 2.5 hours at a time for up to 10 hours total in a work shift while working in safety sensitive environments such as construction sites and moving traffic. The employee also utilizes hearing when explaining recommendations, attending meetings as well as conversing with supervisors, coworkers, vendors, inspection authorities and contractors.

**Seeing**

Health Care Provider initials if restricted

Continuously for up to 2.5 hours at a time for up to 10 hours total in a work shift while working in safety sensitive environments such as construction sites and moving traffic. The employee also utilizes vision when reviewing and completing reports, looking at plans, performing computer duties such as AutoCad, etc.

**Working with Heightened Awareness**

Health Care Provider initials if restricted

Continuously for up to 2 hours at a time for up to 10 hours total in a work shift while working in safety sensitive environments such as construction sites. The employee must also have a heightened awareness when working around moving traffic, streams, etc.

**ENVIRONMENTAL FACTORS**

Work is performed in an office as well as undeveloped land, streams, construction and urban settings etc. The employee is exposed to construction equipment, moving machinery (such as heavy equipment), varying outside temperatures, inclement weather, moving traffic, streams, uneven terrain, animals, etc.

**The noise level is**

HCP Initials if Restricted

Approximately 50-130 decibels. The noise is caused by construction zones.

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

HCP Initials if Restricted

Outside weather: Occasionally

Non-weather related temperatures below 55 degrees: Rare

Non-weather related temperatures above 75 degrees: Rare

Wet: Occasionally

Humidity/dampness: Occasionally

Fumes: Occasionally

Odors: Occasionally

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Dusts: Occasionally  
Mists: Rarely to Occasionally  
Gases: Rarely  
Moving mechanical parts: Occasionally  
Vibration: Occasionally  
Working in high, exposed places: Occasionally  
Radiation: Rare  
Toxic or caustic chemicals: Rare  
Confined spaces: Rarely

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**POTENTIAL MODIFICATIONS TO JOB**

Alternate tasks to reduce static positions.

Alternate bending/stooping, kneeling and squatting to reduce or eliminate physical activity.



## 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

---

Printed name & title of employee

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Signature of employee

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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