

COUNTY OF SONOMA - JOB DEMANDS ANALYSIS

JOB CLASSIFICATION: Traffic Signal Technician
DEPARTMENT: Transportation and Public Works
DOT OCCUPATION CODE: 824.381-010

DATE COMPLETED:
DIVISION: Traffic Signal Technician
PHYSICAL DEMAND STRENGTH RATING: VERY HEAVY
 Per Job Analysis

INSTRUCTIONS TO MEDICAL PROVIDERS COMPLETING THIS FORM:

Please use the "Medical Provider Use Only" columns to the right of each section and the "Medical Provider's Comments & Signature" Section on the signature page to provide work restrictions by indicating whether there is some portion of each function that the employee can perform; designating whether each restriction is temporary or permanent; and, if restriction is temporary, stipulating the expected duration of work restriction(s). To finalize the form, please provide the name of the employee evaluated and additional comments, as appropriate, then sign and date where indicated.

FREQUENCY RATING:

Frequency	Percentage of time per shift	Repetition (# times per shift)	8 Hr Shift	9 Hr Shift	10 Hr Shift	12 Hr Shift
Never (N)	n/a	n/a	n/a	n/a	n/a	n/a
Occasionally (O)	1 - 33%	1 – 100	0 - 2.5	0 - 3	0 - 3.5	0 – 4
Frequently (F)	34 - 66%	100 – 500	2.5 - 5.5	3 - 6	3.5 - 7	4 – 8
Continuously (C)	67 - 100%	500+	5.5 – 8	6 - 9	7 - 10	8 - 12

PART 1 - JOB DUTIES/FUNCTIONS:

A. Job Duty/Function	B. Job Duty #	C. Freq. Rating	D. Equipment or tools used to perform (Describe)	E. Specialized Expertise, License, Certification Required? (Describe)	F. Reason position exists? (Y/N)	G. Essential or Non-Essential	Medical Provider Use Only: For each job duty/function, indicate in this column "Can Perform", is "Temporarily Restricted" from performing, or is "Permanently Restricted" from performing.
While performing the following duties, employees in this position work both in a typical shop environment and outdoors in all types of terrain, vegetation, and weather conditions, working in both daylight and dark/dim conditions.							
Employees in this position are subject to rotating standby (on-call) coverage and work long and irregular hours, including nights, weekends, and holidays to respond to after hour calls and during response and recovery phases of emergency situations (storms, accidents, fires, earthquake, flood, etc.).	1	O			Y	Essential	
Installs and maintains traffic signals, flashing beacons, and streetlights; works at heights up to 45 feet; uses hand and power tools including drills, saws, jackhammer, concrete mixers to prepare site, set, remove, and repair traffic signals, beacons, and streetlights; lifts, carries and places supplies and equipment weighing up to 100+ pounds; remains alert while working on	2	O	Truck mounted man-lift, Hand tools, Drills, Saws, Jackhammers, Concrete mixers, Electrical testing	Class C Driver's license.	Y	Essential	

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public roadways in close proximity to moving vehicles.			Equipment; wheel barrow, shovel, Concrete Pull Box				
Operates locating device weighing approx. 5 lbs. for an hour at a time, working in traffic to identify existing underground infrastructure and mark location with spray can/pole; remains alert while working on public roadways in close proximity to moving vehicles.	3	O	Locating device, hand tools and marking paint		Y	Essential	
Takes inventory and places orders; receives deliveries and compares with order/requisition to ensure accuracy; reaches forward, above shoulders and below waist to lift, push, pull, carry, and place items weighing up to 116 pounds; drives truck or other vehicles and operates forklift to pick up and deliver supplies.	4	O	Phone, Computer, Forklift, hand truck, dollies, and hand tools	Forklift Operator Certificate	N	Essential	
Drives pick-up and bucket trucks to/from various sites throughout the County to install, maintain, and inspect traffic signals, flashing beacons, and streetlights; operates bucket truck with man lift; sits for long periods of time; climbs up and down to enter and exit equipment; reaches forward, down, and across to operate controls; monitors and remains alert to traffic, verbal and visual signs from other workers, and to equipment instrument and gauges to detect malfunctions and problems.	5	O	Pick-up, Bucket Truck with man lift	Class C Driver's License	Y	Essential	
Monitors and inspects new construction and work performed by other staff and contractors for completeness, accuracy, and compliance with project plans and specifications including: drives and walks over uneven and slippery surfaces to visually inspect quality and progress of work being performed; provides direction as needed; reports the status of work in progress and any unforeseen problems or requirements to supervisors or managers.	6	O	Vehicle, Hand tools	Class C CA Driver's License	Y	Essential	
Documents and maintains records of activities (work performed, materials required and expended., etc.); prepares reports summarizing progress, status, and results; estimates the type and amount of materials needed for projects; performs various administrative tasks including: maintains electronic and paper files; makes copies; uses a computer to enter and retrieve data; uses fax machines and answers phones.	7	O	Computer, Smart Phone, Pen/Paper, Copier		Y	Essential	

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Tests and repairs electrical equipment using electrical testing equipment and hand tools; assists in design activities.	8	O	Hand tools, Electrical testing equipment		Y	Essential	
Continuously observes safety practices and procedures; actively utilizes and implements established safety practices; wears appropriate safety gear.	9	C	Personal Protective Equipment (PPE)		N	Essential	
Communicates with departmental staff, staff of other agencies, and the general public in person, by phone, and in writing to coordinate activities, provide information, and respond to inquiries and complaints regarding projects and impact of projects; maintains a calm and professional manner when dealing with hostile or verbally abusive members of the public.	10	O	Computer, Phone		Y	Essential	
Participates in training to maintain and enhance knowledge and skills necessary to perform assigned duties.	11	O			N	Essential	

PART 2: PHYSICAL DEMANDS

Activity	Examples of Duties/Functions Requiring Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY: Permanently Restricted
Sitting (i.e. Office work; Orders; Documentation; Driving)	1, 4, 5, 7	F			
Walking (i.e. Installs, Monitors; Maintains, Repairs; Inspects)	1-4,6, 8	F			
Running (i.e. Avoiding Traffic, Install, repairs)	1, 2, 3, 6	O			
Standing (i.e. Installs, Monitors; Maintains, Repairs; Inspects, Trains)	2, 3, 4, 6, 8	F			
Bending-Neck (i.e. Operating machine lift, Installs, Repairs, Documentation, Training)	2-8, 11	C			
Bending-Waist , (i.e. Misc. installs and repairs, operating man lift, office, testing, training)	2-8, 11	F			
Squatting (i.e. Misc. installs, tests and repairs, Accessing signal box and wires)	2, 3, 4, 5, 6, 8	F			
Climbing (i.e. Into and out of Man-lift, ladders)	2, 5,	O			
Kneeling (i.e. Installs, Testing, Repairs, Inventory)	2, 4, 6	F			
Crawling		O			
Twisting-Neck (i.e. Operating man-lift, Driving, Installs, Testing, Repairs, Dealing with Public)	1-11	F			
Twisting-Waist (i.e. Operating man-lift, Driving, Installs, Testing, Repairs)	2-8	F			
Repetitive Hand Use (i.e. Operating Locating Device; Computer; Hand tools)	3, 4, 7, 8	C			
Simple Grasping-Right Hand (i.e. Driving, Office Equip; Hand Tools)	2-8, 10, 11	C			
Simple Grasping-Left Hand (i.e. Driving, Office Equip; Hand Tools)	2-8, 10, 11	C			
Power Grasping-Right Hand (i.e. Power Tools Climbing into/out of Man Lift, Lifting Cover on Signal Box; Pulling wires in signal box Installs, Repairs; Heavy Lifting)	2, 5	F			
Power Grasping-Left Hand (i.e. Power Tools Climbing into/out of Man Lift, Lifting Cover on Signal Box; Pulling wires in signal box Installs, Repairs; Heavy Lifting)	2, 5	F			
Fine Manipulation-Right Hand (i.e. Office, Dials; Testing, Controller Cabinet details)	2, 4, 7, 8	F			
Fine Manipulation-Left Hand (i.e. Office, Dials; Testing, Controller Cabinet details)	2, 4, 7, 8	F			
Pushing and Pulling-Right Hand (i.e. Drawers; Signal box work, lifting cover, pulling wires; Installs; Repairs)	2, 4, 5, 6, 7	F			
Pushing and Pulling-Left Hand (i.e. Drawers, Signal box work, lifting cover, pulling wires; Installs; Repairs)	2, 4, 5, 6, 7	F			
Reaching-Above shoulder level (i.e. Installs; Monitoring, Testing, Repairs)	2, 4, 5, 6	F			
Reaching-Below shoulder level (i.e. Installs; Monitoring, Testing, Repairs)	2, 4, 5, 6	F			
Lifting-up to 10 lbs. (i.e. Document files, Office Equip; Small tools)	1, 2-4, 7, 8, 11	F			
Lifting-11-25 lbs. (i.e. Misc. traffic equipment related parts, materials and supplies, Street Light Luminaires; Power tools)	1, 2, 4, 5,	F			
Lifting-26-50 lbs. (i.e. Smaller signal Heads 35 lbs.; Materials and supplies handling; Batteries 47 lbs.; Power Tools)	2, 4, 8	F			
Lifting 51-75 lbs. (i.e. Lifting metal plates 72 lbs.,	2, 4	O			

Activity	Examples of Duties/Functions Requiring Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY: Permanently Restricted
<i>Larger signal heads 65 lbs., Speed sign 54 lbs., Bags of concrete and sand, 60 lbs., Wire rolls)</i>					
Lifting 76-100 lbs. (i.e. Concrete or mortar, 80 lb. bags, Wire rolls)	2, 4	O			
Lifting 100 + lbs. (i.e. Concrete Pull Box 116 lbs.; Controller cabinet 285 lbs.; 2-person tilted, walked, pushed, maneuvered into bucket, onto truck)	2, 4	O			
Carrying 0-10 lbs. (i.e. Documents, Office Equipment, Small tools and material handling)	1-4, 8, 10, 11	C			
Carrying 11-25 lbs. (i.e. Supplies and Materials: Luminaires Wt. 12 lbs., Traffic Signal Head 35 lbs.; Power Tools)	2, 4, 5	F			
Carrying 26-50 lbs. (i.e. Signal Heads 35 lbs.; Materials and supplies handling; Batteries 47 lbs.; Power Tools)	2, 4, 5	F			
Carrying 51-75 lbs. (i.e. Metal plates 72 lbs., Signal heads 65 lbs., Speed sign 54 lbs., Concrete and sand bags, 60 lbs., Wire rolls)	2, 4, 5	O			
Carrying 76-100 lbs. (i.e. 80 lb. Cement/Sand Bags)	2, 4, 5	O			

PART 3: SENSORY REQUIREMENTS

Activity	Examples of Duties/Functions Requiring Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
Functional vision, normal or corrected (i.e. Driving, Operating Man-lift, Inspecting, Repairing)	1,2,3,4,5,6,7,8	C			
Functional color vision, normal or corrected (i.e. All electrical pull wires color coded)	3,8	C			
Functional night vision, normal or corrected (i.e. Emergency and night work)	1,2,3,5,6,8	C			
Functional hearing, normal or corrected (i.e. Working around live traffic, and heavy equipment)	2,3,5,8	C			
A sense of smell or taste	N/A	N			

PART 4: COMPREHENSION LEVEL

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
Follow Oral Instructions	F			
Follow Written Instructions	F			
Required to sustain concentration	F			

PART 5: NATURE OF TASKS

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
Follow set procedures	C			
Organize own work	F			
Able to ask questions or request assistance when needed	F			
Required to make decisions independently	F			
Required to train and/or lead other staff (i.e. Contractors)	O			
Required to direct other staff (e.g. planning, goal setting, performance)	N			

PART 6: WORK PACE

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
Tightly scheduled and rapid pace of work activities at high volume	F			
Meet time sensitive deadlines	F			
Long and/or irregular hours	O			
Limited/unpredictable opportunity for breaks	O			
Required to perform on-call or emergency work	O			

PART 7: COMPLEXITY/VARIABILITY

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
Variable and unpredictable workflow	O			
Attention divided by issues requiring multi-tasking	O			
Work requires precise attention to detail	C			
Use of judgment in routine matters	C			
Requires use of judgment in adapting procedures from one task to another	F			
Possible legal ramifications associated with work activities or work product	C			

PART 8: INTERACTIONS WITH OTHERS

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
Works with others (e.g., co-workers, other departments/agencies, public)	O			
Interactions limited to giving/receiving information	O			
Interactions exceed giving/receiving information (e.g., advises, persuades, justifies)	O			
Interactions occur under circumstances of emotional stress	O			
Risk of confrontation with violent or assaultive clients or customers	O			

PART 9: ENVIRONMENTAL FACTORS/WORKING CONDITIONS

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
Work Inside	O			
Work Outside	F			
Extreme Heat (above 100 degrees)	O			
Extreme Cold (below 32 degrees)	O			
Excessive Noise (must raise voice to be heard)	F			
Vibration (e.g., jack hammer, hammer drill, chainsaw, etc.)	O			
Dust, Vapors, Fumes, Smoke	F			
Silica, asbestos, etc.	O			
Solvents (e.g., gas, turpentine, etc.)	O			
Grease, oils	O			
Acidic, Caustic Solutions	O			
Pesticides	O			
Explosives (e.g., dynamite, bomb, etc.)	N			
Cleaning supplies, abrasives	O			
Other Chemicals (e.g. drugs and other contraband)	O			
Human Blood, Body Tissues, or Fluids	O			
Human Wastes	O			
Animal Blood, Body Tissues, or Fluids	O			
Animal Wastes	O			
Biological Toxins (e.g., poison ivy, poison oak, anthrax, etc.)	O			
Insect Bites (e.g., ticks, mosquitos, spiders, etc.)	O			
Biomedical Waste	N			
Ionizing Radiation	N			
Non-Ionizing Radiation	N			
Electrical Energy	F			
Walking on uneven, slippery, or rough surfaces (e.g. drainage ditch)	F			
Proximity to moving mechanical parts (e.g., equipment, machinery)	F			
Proximity to moving vehicles or objects	C			
Heights (e.g., rooftop, ladders, scaffolding, etc.)	F			
Contact with water, other liquids, humid conditions - not weather related	O			
Work Below Ground: (e.g., excavation, trench, etc.)	O			
Potential exposure to airborne infectious diseases (e.g. clinics, labs, corrections)	N			
Operates non-commercial motor vehicles (cars, trucks)	F			
Operates commercial vehicles – CDL Class _____ Endorsements _____	N			
Operates passenger van to transport clients, inmates, etc.	N			
Pulls non-commercial trailers or equipment	O			
Operates heavy equipment (e.g. man- lift)	O			
Other: Forklift – Certification Required	O			

PART 10: MEDICAL SCREENING, SURVEILLANCE AND VACCINATION REQUIREMENTS:

Please check each of the medical screening, surveillance, and vaccination requirements that apply to the position, and indicate if the requirement applies pre-employment/pre-placement only, or whether there are additional requirements after hire.

Medical Screening, Surveillance or Vaccination	Pre-Hire	Post-Hire	Frequency (one time, annual, etc.)
Audiometric Testing			
DOT Drug and Alcohol Screening			
DOT Physical Exam			
Respirator Physical Exam	x		One time
Respirator Questionnaire – Short			
Respirator Questionnaire – Standard	x	x	Annually
Blood lead level			
Hazardous Waste/Emergency Worker physical			
Heavy metal screen (mercury, lead, arsenic)			
HINT Hearing Noise Sensitivity Testing			
Tuberculosis skin test			
Vaccine: MMR			
Vaccine: Hepatitis B			
Vaccine: Influenza			
Vaccine: Meningococcal			
Vaccine: Pneumococcal			
Vaccine: Rabies			
Vaccine: Rabies Titer			
Vaccine: Tdap			
Vaccine: Chickenpox			

PART 11: ADDITIONAL INFORMATION, PICTURES, ETC.



Controller Cabinet Wt. 285 lbs.



Controller Cab. Open



Traffic Signal Box Lid



Forklift



Man-lift



Traffic Signal Heads



Shop Storage, four levels up to 81.5 in.



**Wire Spool
Wts. vary 50-150 lbs.**



**Speed Sign 54 lbs.
Lifted manually into bucket truck.**



Battery 47 lbs.



Light poles in yard storage.



Poles



Concrete Pull Box 18"x27"x12" – 116 lbs.



Concrete Pull Box 18"x27"x12" – 116 lbs.