

COUNTY OF SONOMA - JOB DEMANDS ANALYSIS

JOB CLASSIFICATION: Senior Engineer
DEPARTMENT: Sonoma County Public Infrastructure
PHYSICAL DEMAND STRENGTH RATING: Sedentary/Light

DATE COMPLETED: 05/2026
DIVISION: Roads Engineering

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/Not Required (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. 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 in the office, in a typical office setting, sitting for long periods of time and routinely using office equipment such as computers, phones, photocopiers, fax machines, etc.; and work in the field, working outdoors in all types of terrain, vegetation, and weather conditions, performing duties in both daylight and dark/dim conditions.				Professional Engineer License		
Conducts field reviews, research and analyses for engineering projects. Field work may require negotiation of steep, rough, uneven and/or slippery surfaces adjacent to high-speed traffic. Working outdoors in inclement weather. Requires attention to detail and ability to perform mathematical calculations.	1	O	Vehicle, PPE, pen and paper, and communication devices (radio, phone laptop)	CA Driver's License	E	

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Prepares engineering calculations to support design. Requires attention to detail and ability to perform mathematical calculations.	2	O	Computer, Keyboard, Mouse		E	
Prepares engineering estimates and specifications. Required attention to detail and ability to perform mathematical calculations.	3	O	Computer, Keyboard, Mouse		E	
Prepares plans using CAD software.	4	F	Computer, Keyboard, Mouse		E	
Prepares maps/deeds under supervision of land surveyor for rights of way and coordinates to secure needed rights of way.	5	O	Computer, Keyboard, Mouse		E	
Checks/tracks the work/progress/performance of subordinates and provides training.	6	O	Computer, Keyboard, Mouse		E	
Makes engineering decisions related to deviations from design standards. Requires careful study and interpretation of design manuals and engineering standards.	7	O			E	
Provides information and review to environmental staff at PRMD. Requires preparation of written directions. Requires careful study of prepared written reports and documents.	8	O	Computer, keyboard, mouse,		E	
Works with designers at utility companies to coordinate relocation of utilities. Requires preparation of written directions. Requires careful study of prepared construction plans and drawings. Requires frequent meetings with utility representative in situations that can be argumentative or adversarial.	9	O	Computer, keyboard, mouse, phone		E	
Works with permitting agencies. i.e., Caltrans, Fish & Games, etc. to secure needed permits. Requires submitting written applications and reports. Requires frequent meetings with utility representative in situations that can be argumentative or adversarial.	10	O	Computer, keyboard, mouse, phone		E	
Prepares written project descriptions. Requires careful study or site conditions, review & interpretation of engineering standards, Requires the ability to convey complex plans into a written description.	11	O	Computer, Keyboard, Mouse		E	

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Prepares correspondences to property owners to discuss designed improvements. Requires frequent meetings with public, sometimes at the project site, in situations that can be argumentative, adversarial or confrontational. Must be able to diffuse tense, emotionally charged situations.	12	O	Computer, Keyboard, Mouse, Phone		E	
Prepares engineering reports in support of permit applications. Requires careful study and interpretation of regulations. Requires submitting written applications & reports.	13	O	Computer, keyboard, mouse,		E	
Prepares/coordinates review of Request for Proposals (RFP's).	14	O	Computer, keyboard, mouse, phone, calculator, ruler		E	
Tracks progress of consultants and reviews consultant's work.	15	O	Computer, keyboard, mouse, phone		E	
Frequent meetings with outside agencies and public require traveling to locations not accessible by transit.	16	O	Vehicle, laptop	CA Driver's License	E	
Prepares written justifications for design exceptions.	17	O	Computer, keyboard, mouse		E	
Prepares reports on progress, recommendations, projects, alternatives.	18	O	Computer, keyboard, mouse		E	
Supervises professional & non-professional technical design staff.	19	C			E	
Supervises contract inspection, survey, and laboratory staff.	20	C			E	

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
1 Sitting	1-20	F			
2 Walking	1-20	O			
3 Running	N/A	N			
4 Standing	1-20	O			
5 Bending-Neck	1-20	F			
6 Bending-Waist	1-20	O			
7 Squatting	1-20	O			
8 Climbing	1	O			
9 Kneeling	1	O			
10 Crawling	1	O			
11 Twisting (neck)	1-20	F			
12 Twisting (waist)	1-20	O			
13 Repetitive Hand Use	2-6, 8-15, 17-18	F			
14 Simple Grasping-Right Hand	1-20	F			
15 Simple Grasping-Left Hand	1-20	F			
16 Power Grasping-Right Hand	1	O			
17 Power Grasping-Left Hand	1	O			
18 Fine Manipulation-Right Hand	1-20	O			
19 Fine Manipulation-Left Hand	1-20	O			
20 Pushing and Pulling (right hand)	1-20	O			
21 Pushing and Pulling (left hand)	1-20	O			
22 Reaching (above shoulder level)	1-20	O			
23 Reaching (below shoulder level)	1-20	O			
24 Lifting-up to 10 lbs.	1-20	F			
25 Lifting-11-25 lbs.	1-20	O			
26 Lifting-26-50 lbs.		N			
27 Lifting 51-75 lbs.		N			
28 Lifting 76-100 lbs.		N			
29 Lifting 100 + lbs.		N			
30 Carrying 0-10 lbs.	1-20	F			
31 Carrying 11-25 lbs.	1-20	O			
32 Carrying 26-50 lbs.		N			
33 Carrying 51-75 lbs.		N			
34 Carrying 76-100 lbs.		N			

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
1 Functional vision, normal or corrected	1-20	C			
2 Functional color vision, normal or corrected	1-20	O			
3 Functional night vision, normal or corrected	1	O			
4 Functional hearing, normal or corrected	1-20	C			
5 A sense of smell or taste		N			

PART 4: COMPREHENSION LEVEL

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Follow Oral Instructions	F			
2 Follow Written Instructions	F			
3 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
1 Follow set procedures	F			
2 Organize own work	C			
3 Able to ask questions or request assistance when needed	F			
4 Required to make decisions independently	F			
5 Required to train and/or lead other staff	F			
6 Required to direct other staff (e.g. planning, goal setting, performance)	F			

PART 6: WORK PACE

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

PART 7: COMPLEXITY/VARIABILITY

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

PART 8: INTERACTIONS WITH OTHERS

Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Works with others (e.g., co-workers, other departments/agencies, public)	F			
2 Interactions limited to giving/receiving information (presentations)	O			
3 Interactions exceed giving/receiving information (e.g., advises, persuades, justifies)	F			
4 Interactions occur under circumstances of emotional stress	O			
5 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
1 Work Inside	C			
2 Work Outside	O			
3 Extreme Heat (above 100 degrees)	O			
4 Extreme Cold (below 32 degrees)	O			
5 Excessive Noise (must raise voice to be heard)	N			
6 Vibration (e.g., jack hammer, hammer drill, chainsaw, etc.)	N			
7 Dust, Vapors, Fumes, Smoke	N			
8 Silica, asbestos, etc.	N			
9 Solvents (e.g., gas, turpentine, etc.)	N			
10 Grease, oils	N			
11 Acidic, Caustic Solutions	N			
12 Pesticides	N			
13 Explosives (e.g., dynamite, bomb, etc.)	N			
14 Cleaning supplies, abrasives	N			
15 Other Chemicals (e.g. drugs and other contraband)	N			
16 Human Blood, Body Tissues, or Fluids	N			
17 Human Wastes	N			
18 Animal Blood, Body Tissues, or Fluids	N			
19 Animal Wastes	N			
20 Biological Toxins (e.g., poison ivy, poison oak, anthrax, etc.)	O			
21 Insect Bites (e.g., ticks, mosquitos, spiders, etc.)	O			
22 Biomedical Waste	N			
23 Ionizing Radiation	N			
24 Non-Ionizing Radiation	N			
25 Electrical Energy	N			
26 Walking on uneven, slippery, or rough surfaces	F			
27 Proximity to moving mechanical parts (e.g., equipment, machinery)	O			
28 Proximity to moving vehicles or objects	F			
29 Heights (e.g., rooftop, ladders, scaffolding, etc.)	O			
30 Contact with water, other liquids, humid conditions - not weather related	N			
31 Work Below Ground: (e.g., excavation, trench, etc.)	N			
32 Potential exposure to airborne infectious diseases (e.g. clinics, labs, corrections)	N			
33 Operates non-commercial motor vehicles (cars, trucks)	F			
34 Operates commercial vehicles – CDL Class _____ Endorsements _____	N			
35 Operates passenger van to transport clients, inmates, etc.	N			
36 Pulls non-commercial trailers or equipment	N			
37 Operates heavy equipment	N			
38 Other:				

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.)
1 Audiometric Testing			
2 DOT Commercial Driver Drug and Alcohol Screening			
3 DOT Commercial Driver Physical Exam			
4 Respirator Physical Exam			
5 Respirator Questionnaire – Short			
6 Respirator Questionnaire – Standard			
7 Blood lead level			
8 Hazardous Waste/Emergency Worker physical			
9 Heavy metal screen (mercury, lead, arsenic)			
10 HINT Hearing Noise Sensitivity Testing			
11 Tuberculosis skin test			
12 Vaccine: MMR			
13 Vaccine: Hepatitis B			
14 Vaccine: Influenza			
15 Vaccine: Meningococcal			
16 Vaccine: Pneumococcal			
17 Vaccine: Rabies			
18 Vaccine: Rabies Titer			
19 Vaccine: Tdap			
20 Vaccine: Chickenpox			

PART 11: ADDITIONAL INFORMATION, PICTURES, ETC.