

COUNTY OF SONOMA - JOB DEMANDS ANALYSIS

JOB CLASSIFICATION: Communications Technician I/II
DEPARTMENT: Sheriff
PHYSICAL DEMAND STRENGTH RATING: Very Heavy per Job Analysis

DATE COMPLETED: July 2019
DIVISION: Telecommunications

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 both in a law enforcement office environment and outdoors in all types of terrain, vegetation, and weather conditions, performing duties in both daylight and dark/dim conditions and working at heights up to 225 feet.						
Employees in this position are subject to stand-by/call-back on a regular, rotating basis and are required to work long and irregular hours, including nights, weekends, and holidays, as needed to respond to calls and maintain critical communication systems.	1	O			E	
While in the field or in the office, analyzes, monitors, troubleshoots and resolves network performance, integrity, security, availability, and other network issues and problems.	2	C	Vehicle, Computer/Tablet, Test equipment	CA Driver's License	E	

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Works closely with department customers, including law enforcement, County agencies, and non-Public Safety agencies; analyzes and understands their communications needs; plans, designs, configures, installs, upgrades, administers, and maintains complex components and/or segments of the County radio communications system, including LANS and WANS, internet, all aspects of hardware (servers, etc.), software, operating systems, and inter-connectivity; analyzes, monitors, recommends and optimizes technologies to enhance network performance; evaluates network software, hardware, and inter-connectivity products.	3	C	Computer/Tablet, Network Analyzer	CCNA/ Network Skills Certification	E	
Installs, maintains, and repairs transmitters, receivers, and related radio equipment; adjusts transmitters and receivers for maximum efficiency; tests circuits, transistors and other components, using various specialized test equipment; isolates defects in the circuits and equipment components, and corrects or replaces them; measures frequencies, modulation, and power output of transmitters to ensure compliance with federal regulations; operates soldering equipment, hand and power tools;.	4	F	Multi meter, Oscilloscope, Service Monitors, Spectrum Analyzer, Watt Meter, Other Test Equipment	Radio- Telephone Operator's License	E	
Performs repairs at heights up to 225 feet; climbs tower while working with ropes and pulleys; walks and climbs over steep, slippery, and uneven terrain to access remote sites while carrying transmitters, receivers, batteries, and other equipment weighing up to 120 pounds; works in tight crawlspaces, overhead and below the floor to install cables; crawls and pulls cables, weighing up to 25 pounds.	5	O	Harness, Self-Retracting Lanyards, Positioning Restraints Cable grabs, Ropes, Pulleys, Soldering Equipment, Hand/ Power Tools (Sawzall, Drill, Grinder, etc.), dust mask, hard hat, steel toed boots		E	
Drives county vehicle/pick-up truck to and from various radio sites throughout the region, including rugged, remote, and off road locations; secures and pulls utility trailer; loads and unloads equipment and supplies weighing up to 120 pounds; may be transported by helicopter to work sites.	6	O	4 Wheel Drive Pick-up/SUV, Trailer	CA Class C Driver's License	E	

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Develops and maintains documentation, procedures and training related to systems design, configuration, troubleshooting, etc.; designs and maintains backup and recovery procedures.	7	F	Computer/Tablet		E	
Maintains inventory of parts and equipment including: takes inventory and places orders; receives deliveries and compares with order/requisition to ensure accuracy; maintains, rotates and replenishes stock; climbs step ladder; reaches forward, above shoulders and below waist to lift, push, pull, carry, and place items weighing up to 120 pounds, with assistance as needed.	8	O	Step stool, forklift		E	
Continuously observes safety practices and procedures; actively utilizes and implements established safety practices; wears appropriate personal protective equipment; reports or corrects unsafe conditions.	9	C	PPE, including hearing and eye protection, gloves, hard hats, steel toed boots		E	
Communicates in person, by phone or email with other staff, supervisors, and other agencies to coordinate activities and provide detailed information regarding status of repairs, incidents, etc.; contacts and works with vendor representatives to resolve suspected and actual problems.	10	F	Phone, Computer		E	
Participates in training to maintain and enhance required knowledge and skills including: tower climbing and other physical abilities; classes, seminars, workshops and ongoing research to stay current on developments in telecommunications; travels to out of area locations, including out-of-state locations.	11	O	Vehicle, Computer	CA Driver's License	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 (e.g. driving to radio towers site, repairing radios at work station, reading emails, ordering parts)	2,3,4,5,6,7,9,10,11	F			
2 Walking (e.g. installing radio racks, loading and unloading supplies, testing circuits, replacing outdated or damaged equipment)	1,2,3,4,5,6,8,9,10,11	O			
3 Running		N			
4 Standing (e.g. checking inventory, loading equipment such as new radios, chargers , and transmitters)	1,2,3,4,5,6,8,9,10,11	F			
5 Bending-Neck (e.g. making repairs to radio equipment, responding to emails, designing radio communication systems)	2,3,4,5,6,7,8,9,10,11	F			
6 Bending-Waist (e.g. installing and removing radio equipment, loading and unloading supplies, inspecting equipment for damage or repairs)	3,4,5,6,8,11	F			
7 Squatting (e.g. unloading supplies of orders, installing radio equipment into rack)	2,3,4, 5,6,8,11	O			
8 Climbing (e.g. climbing radio towers for maintenance and repairs, step ladders to access supplies on shelving, climbing ladders to diagnose issues/problems)	5,8	O			
9 Kneeling (e.g. installing and removing radio equipment, loading and unloading hand tools and supplies)	2,3,4, 5,6,8,11	O			
10 Crawling (e.g. diagnosing network issues, testing equipment in tight/cramped areas,	2,3,4, 5,6,8,11	O			
11 Twisting-Neck (e.g. repairing radio equipment, driving county vehicle, adjusting transmitters)	2,3,4, 5,6,8,11	F			
12 Twisting-Waist (installing chargers, building new radio rack systems, operates forklift)	2,3,4, 5,6,8,11	F			
13 Repetitive Hand Use (e.g. wiring of electrical systems, repairing or installing radios, ordering stock and supplies)	2,3,4, 5,6,8,11	C			
14 Simple Grasping-Right Hand (e.g. Using small hand tools for repairs on equipment, holding testing equipment, holding tablet)	2,3,4,5,6,7,8,9,10,11	C			
15 Simple Grasping-Left Hand (e.g. Using small hand tools for repairs on equipment, holding testing equipment, holding tablet)	2,3,4,5,6,7,8,9,10,11	C			
16 Power Grasping-Right Hand (e.g. lifting heavy equipment such as batteries, chargers and transmitters, climbing towers for maintenance or repair)	2,3,4,5,6,7,8,9,10,11	O			
17 Power Grasping-Left Hand (e.g. lifting heavy equipment such as batteries, chargers and transmitters, climbing towers for maintenance or repair)	2,3,4,5,6,7,8,9,10,11	O			
18 Fine Manipulation-Right Hand (e.g. repairing small electrical components in radios, transmitters and receivers, operates soldering equipment)	2,3,4,5	F			
19 Fine Manipulation-Left Hand (e.g. repairing small electrical components in radios, transmitters and receivers, operates soldering equipment)	2,3,4,5	F			

Activity	Examples of Duties/Functions Requiring Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY: Permanently Restricted
20 Pushing and Pulling-Right Hand (e.g. installing transmitters and receivers into radio racks, pushing carts with supplies and stock, pulling damaged parts from radio racks)	3,4,5,6,8	O			
21 Pushing and Pulling-Left Hand (e.g. installing transmitters and receivers into radio racks, pushing carts with supplies and stock, pulling damaged parts from radio racks)	3,4,5,6,8	O			
22 Reaching-Above shoulder level (e.g. storing ropes or other supplies on shelving, installing new equipment into radio racks, climbing radio towers)	3,4,5,8	O			
23 Reaching-Below shoulder level (e.g. maintaining inventory of parts and equipment, lifting batteries)	3,4,5,8	F			
24 Lifting up to 10 lbs. (e.g. hand tools, two way radios, circuit boards, electrical tape)	3,4,5,6,8	C			
25 Lifting 11-25 lbs. (e.g. radio parts, spools of wire, breaker boxes)	3,4,5,6,8	F			
26 Lifting 26-50 lbs. (e.g. ropes for tower climbs, radios, breaker panels, batteries)	3,4,5,6,8	F			
27 Lifting 51-75 lbs. (e.g. charging systems 56 lbs., radio racks.)	3,4,5,6,8	O			
28 Lifting 76-100 lbs. (e.g. batteries	5,6	O			
29 Lifting 100 + lbs. (e.g. batteries 120 lbs. – assisted lift)	5,6	O			
30 Carrying 0-10 lbs. (e.g. hand tools, two way radios, circuit boards, electrical tape)	3,4,5,6,8	C			
31 Carrying 11-25 lbs. (e.g. radio parts, spools of wire, breaker boxes)	3,4,5,6,8	F			
32 Carrying 26-50 lbs. (e.g. ropes for tower climbs, radios, spools of wire)	3,4,5,6,8	F			
33 Carrying 51-75 lbs. (e.g. charging systems 56 lbs., radio racks.)	3,4,5,6,8	O			
34 Carrying 76-100 lbs. (e.g. batteries 120 lbs. – assisted lift)	5,6	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
1 Functional vision, normal or corrected	2,3,4,5,6,7,8,9,11	C			
2 Functional color vision, normal or corrected (e.g. wiring of electrical components)	3,4,5	C			
3 Functional night vision, normal or corrected (e.g. driving to tower sites during twilight hours)	2,5,6	O			
4 Functional hearing, normal or corrected	10,11	F			
5 A sense of smell or taste(e.g. to identify electrical fires or fumes)	2,6	O			

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	C			

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	C			
2 Organize own work	O			
3 Able to ask questions or request assistance when needed	C			
4 Required to make decisions independently	F			
5 Required to train and/or lead other staff	O			
6 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
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	O			

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	F			
2 Attention divided by issues requiring multi-tasking	F			
3 Work requires precise attention to detail	C			
4 Use of judgment in routine matters	C			
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	C			

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)	C			
2 Interactions limited to giving/receiving information	F			
3 Interactions exceed giving/receiving information (e.g., advises, persuades, justifies)	O			
4 Interactions occur under circumstances of emotional stress	O			
5 Risk of confrontation with violent or assaultive clients or customers	N			

PART 9: ENVIRONMENTAL FACTORS/WORKING CONDITIONS:

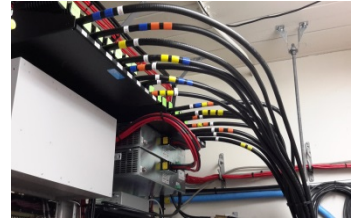
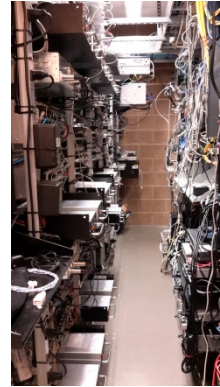
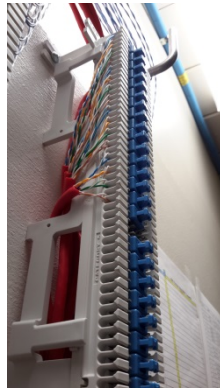
Activity	FREQUENCY RATING Never, Occasional; Frequent, or Constant	MEDICAL Can Perform	PROVIDER Temporarily Restricted	USE ONLY Permanently Restricted
1 Work Inside	F			
2 Work Outside	F			
3 Extreme Heat (above 100 degrees)	O			
4 Extreme Cold (below 32 degrees)	O			
5 Excessive Noise (must raise voice to be heard)	O			
6 Vibration (e.g., jack hammer, hammer drill, chainsaw, etc.)	O			
7 Dust, Vapors, Fumes, Smoke	O			
8 Silica, asbestos, etc.	O			
9 Solvents (e.g., gas, turpentine, etc.)	O			
10 Grease, oils	O			
11 Acidic, Caustic Solutions	O			
12 Pesticides	O			
13 Explosives (e.g., dynamite, bomb, etc.)	N			
14 Cleaning supplies, abrasives	O			
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	O			
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 (e.g. Radiofrequency (RF) electromagnetic radiation (EMR))	O			
25 Electrical Energy – 120 volts and lower	C			
26 Walking on uneven, slippery, or rough surfaces	O			
27 Proximity to moving mechanical parts (e.g., equipment, machinery)	O			
28 Proximity to moving vehicles or objects	O			
29 Heights (e.g., rooftop, ladders, scaffolding, etc.)	O			
30 Contact with water, other liquids, humid conditions - not weather related	O			
31 Work Below Ground: (e.g., excavation, trench, etc.) – installing cables	O			
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	O			
37 Operates heavy equipment	N			
38 Other:	N			

PART 10: MEDICAL SCREENING, SURVEILLANCE AND VACCINATION REQUIREMENTS: Not applicable

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.



**Example of Radio Tower
Tallest Tower serviced 225 feet**

Examples of communication rooms layout and wiring set up



Charger 17" x 15" x 17" – 56 lbs.



**Two-way Radios – average weight 2 lbs.
Staging area in workshop
Smaller Batteries stored at 4-inch height**

**Example of Radio Racks (7.5- 8 feet tall) for assembly and trail runs
Completed racks are broken down and loaded for transportation to different radio tower sites**



**Examples of hand tools
Circular saw - 10 lbs.**



Battery 20" x 5" x 13" – 120 lbs.



**Spools of Wiring – 35 lbs.
Radio Equipment (pictured behind wire) -19" x 5" x 15" 45 lbs.**