

PHYSICAL & MENTAL REQUIREMENTS/WORKING CONDITIONS									
City of Virginia Beach, VA									
Job Title:	Maintenance Engineer II				Position Number(PCN):	B.001565.1			
Div./Office:	PWD 651 Electrical	Approver's Name							
Date of Last Update:	October 11, 2021	Approver's Title							
Fields to the right (Y/N): The position's status AND If the background check must be passed by the incumbent									
Safety Sensitive:		Yes	Child Protective Services (CPS) Background:			No	VCIN Background:		No
REQUIREMENTS									
FREQUENCY: Seldom = Infrequent, < 5%; Occasional = 5% to 25% of time on job; Frequent = 25% to 75% of time on job; Constant = Over 75% of time on job.									
Typical DURATION: Short = < 1 hr per occurrence; Moderate = 1-2 hrs per occurrence; Substantial = 2-6 hrs per occurrence; Long = > 6 hrs per occurrence.									
Physical Demands				Working Conditions					
Element	Condition/Level/Value	Frequency	Duration	Element	Condition/Level/Value	Frequency	Duration		
Standing		Frequent	Substantial	Working Outside: in all weather conditions			Occasional	Moderate	
Walking		Frequent	Substantial	Working Alone: out of communication w/others			Occasional	Short	
Sitting		Occasional	Short	Extreme Temperatures	At/above 90 degrees	Occasional	Substantial		
Reaching	Shoulder level or higher	Frequent	Moderate		Below 30 degrees	Occasional	Substantial		
Lifting	Up to 25 lbs.	Frequent	Short	Extreme Wetness			Occasional	Short	
	Over 50 lbs.	Occasional	Short	Extreme Dryness			N/A	N/A	
Carrying	Weight: Over 50 lbs.	Occasional	Short	Exposure to Traffic	High Traffic Low Speed	Occasional	Short		
	Distance: Over 25 ft.	Occasional	Moderate						
Pushing	Estimated weight-resistance equivalency			Congested Area/Workspace			Frequent	Moderate	
	Over 50 lbs.	Occasional	Short	Confined Space- Permit REQUIRED			Occasional	Short	
Pulling	Estimated weight-resistance equivalency			Working Below Ground			Occasional	Short	
	Over 50 lbs.	Occasional	Short	Working at Heights (ft.)	Up to 12 ft.	Frequent	Moderate		
Working Overhead	Using hand tools	Frequent	Substantial		Over 40 ft.	Occasional	Moderate		
	Using power tools	Occasional	Moderate	Noise Level: > 85 decibels TWA for 8 hrs.	Yes	Frequent	Moderate		
	Weight: Up to 50 lbs.	Occasional	Short						
Climbing Stairs		Occasional	Short	Vibrations	Hammer-drill	Occasional	Short		
Climbing Ladders		Frequent	Moderate						
Balancing		Frequent	Moderate		Body area(s):	Ex- Trunk, shoulders, arms, and hands.			
Stooping		Frequent	Short	Dust / Dirt / Particulate			Frequent	Moderate	
Kneeling/Squatting		Frequent	Short	Radiation			N/A	N/A	
Bending		Frequent	Short	Silica/Fiberglass			Seldom	Short	
Crawling		Occasional	Short	Asbestos			Seldom	Short	
Explosive Strength: Short bursts of muscle force to propel oneself.		Occasional	Short	Aerosols & Gases	Irritant	Seldom	Short		
Trunk Strength: Use of abdominal and lower back muscles.		Frequent	Short	Hazardous Materials /Chemicals			N/A		
							undefined		
							undefined		
Dynamic Strength: Use of muscle force repeatedly or continuously & resistant to fatigue.		Occasional	Short	Petroleum Products	Grease	Seldom	Short		
					Liquid	Seldom	Short		
Repetitive Limb Movement	Fingers/Wrist	Constant	Substantial	Electrical Hazard			Constant	Long	
	Arm/Shoulder	Constant	Substantial	Fire Hazard			Frequent	Frequent	
Dexterity	Grasping	Constant	Substantial	Infectious Diseases Exposure Type(s):	Sewer-like work spaces	Seldom	Short		
	Handwriting	Occasional	Short		Air/Blood-borne pathogens	Occasional	Short		
Repetitive Twisting	Wrist/Elbow	Frequent	Substantial	Symbols:	Ex- Repair sewer pipes; empty residence trash cans.				
	Shoulder	Frequent	Substantial		< equal to or less than	< less than			
Awkward Positions & Motions	Awkward positions	Frequent	Short		> equal to or greater than	> greater than			
	Awkward motions	Occasional	Short						

Sensory Demands					Working Conditions (cont.)			
Element	Condition/Level/Value	Frequency	Duration		Element	Condition/Level/Value	Frequency	Duration
Vision	20/20 w/correction	Constant	Long		Hazardous Surfaces	Extremely dark areas	Frequent	Moderate
	Color vision (colors)	Constant	Long			Abrupt uneven surfaces	Occasional	Short
	Depth perception							
	Night vision	Occasional	Moderate					
Hearing	High pitches	Occasional	Short		Other Hazards	Electric shock	Constant	Long
Smell	Burning odor	Occasional	Short			Stored energy-mechanical	Frequent	Moderate
	Sewage	Seldom	Short					
	Petroleum	Occasional	Short					
Touch	Distinguish temperature	Frequent	Short		Hours Worked	Four 10-hour days	Constant	
						More than 40 hours/week	Occasional	
Voice	Limited Verbal	Frequent	Moderate					
Personal Protective Equipment (PPE)					Equipment Operation & Use			
Category	Type	Frequency	Duration		Category	Type	Frequency	Duration
Eye and Face Protection	Safety glasses w/side shields	Frequent	Substantial		Motor Vehicles	Sedan/Pickup/Van	Frequent	Short
	Face shield	Frequent	Substantial			Truck GVWR <= 26,000 lbs.	Frequent	Short
	Welding mask/hood	Occasional	Short		Heavy Equipment	Back hoe	Seldom	Short
Respiration Protection	Dust mask	Occasional	Moderate					
Hearing Protection	Both ear plugs and muffs	Frequent	Moderate		Other Equipment or Machinery	Forklift	Seldom	Short
						Bobcat	Seldom	Short
Head Protection	Hard hat (electrical shock)	Frequent	Substantial				Ditchwitch	Seldom
	Fire/heat resistant balaclava/hood	Frequent	Moderate					
Hand Protection	Electrical hazard insulated	Frequent	Substantial		Hand-Held Power Tools	Cordless drill	Constant	Substantial
	Cut resistant	Occasional	Moderate			Impact drill/wrench	Frequent	Moderate
						Jack hammer	Seldom	Short
				Cutoff saw		Seldom	Short	
Foot Protection	Electrical hazard insulated	Constant	Long		Hand Tools and Instruments	Electrical tools	Constant	Long
	Steel/composite toe-safety rated	Constant	Long			Carpentry tools	Frequent	Moderate
						Electronic tools	Frequent	Moderate
Body, Arm, and Leg Protection	Arc Rated	Occasional	Moderate				Mechanic tools	Frequent
	Flame resistant	Constant	Long		Office Machines & Equipment	Computer	Frequent	Short
						Printer/Copier/Fax	Frequent	Short
						Photography equipment	Occasional	Short
Operator License					Commercial Driver's License			
NOTE: If CDL is required, show CDL Class in element to right.	Type				VA DMV requires: 20/40 in each eye w/o telescopic lens & ≥140° horizontal vision.	N/A		
	Standard Driver's License							
Other physical or sensory demands, working conditions, equipment, hazards, PPE, etc., not indicated above:								

Mental Requirements	
Evaluate based on the level of complexity [least to most] inherent in the job using the examples provided; then select the number from the drop-down list that matches the column which best represents the mental demand required in each element.	
1 Comprehend Verbal Communication - Understand information and directions which are provided verbally	Level
Job requires the ability to understand and follow: Complex information where the listener must analyze the information presented, discern the key facts vs. opinions, and make a determination on appropriate recommendation or action.	
2 Communicate Orally - Verbally express thoughts and directions	Level
Job requires: Communicating specialized information to co-workers, supervisors or customers.	
3 Comprehend and Follow Written Material or Instructions - Understand written material, interpret appropriately, and adhere to the procedures stated.	Level
Job requires ability to comprehend: Detailed written material in the form of informational reports, memos, articles, plans and drawings to be used in performing duties.	
4 Written Communication Skills - Express thoughts and directions in writing	Level
Job requires: Ability to prepare basic written information and relay it to others using a basic format such as a form or email.	
5 Maintain an Appropriate Work Pace - The flow or rate of incoming work assignments and the expectations for completion of tasks	Level
Job requires ability to adhere to work schedule: In moderately paced environment with some unexpected assignments.	
6 Perform Complex or Varied Tasks - The variety of tasks and assignments and the level of complexity of those tasks/assignments	Level
Job requires ability to perform: A variety of tasks at the fully functional independent level.	
7 Interact and Relate to Peers, Co-Workers, or the Public - The nature and level of interaction with others required of the job	Level
Job requires interaction: With a variety of individuals or groups outside the immediate unit/agency to collaborate on issues or projects.	
8 Decision Making & Reasoning Ability - The extent to which the job requires logic to analyze information, draw conclusions/ generalizations, and make decisions based on facts	Level
Job requires: Considerable reasoning and decision making. Issues and/or data are interpreted and evaluated, alternatives are evaluated, and recommendations are made for resolution of issues.	
9 Memory and Recall - The body of stored knowledge required and the retrieval of that information to accomplish duties	Level
Job requires the ability to: Remember information from broad bodies of knowledge (engineering, psychology, biology, law, etc.) and apply it to projects and assignments.	
10 Flexibility and Adaptability - The extent to which one must adjust to changing circumstances and expectations, take on new challenges on short notice, and/or deal successfully with changing priorities and workloads	Level
Job requires flexibility and willingness: To be adaptable in assessing customer/client needs and tailoring a non-typical solution.	
11 Attention Span - Sustained attention or the time spent continuously on task without becoming distracted to successfully perform duties	Level
Job tasks are: Varied and typically of moderate duration requiring sustained focus. Lapses may result in injury or legal or financial liability.	
12 Attention to Detail - Thoroughness and accuracy are required to accomplish tasks	Level
Job tasks: Involve numerous and various details, some of which have subtle differences, that require continuous and close attention to detail to facilitate accuracy of outcome. Inattention to detail could result in legal or financial liability.	
13 Reaction Time - Describes work that requires an immediate response or decision	Level
Job requires the ability to: Provide an immediate response/decision to maintain normal daily operations, procedures or processes. Untimely response/decision could lead to serious injury, or legal or financial liability.	
14 Direct, Control, and Plan the Work of Others - Determine the time, place and sequence of work procedures, operations, and actions. Establish goals and objectives, motivate, and promote cooperation and teamwork in the work group	Level
Job requires: Supervision of a small group of employees (5 or less).	
15 Influence Others - Obtain cooperation from others to accomplish tasks and objectives	Level
Job requires: Obtaining support from other work groups to accomplish objectives.	
16 Stress Tolerance - Ability to perform duties without anxiety when faced with difficulties. Having positive stress tolerance is being able to stay calm in situations of heavy workload, tight deadlines, and/or difficult customers	Level
Job requires the ability to:	

