

National Occupational Standards: Construction Electrician

Essential Skills contribute to success in apprenticeship and ongoing journey person skills training.

National Occupational Standards for Red Seal trades reference **Essential Skills Profiles** (www.red-seal.ca) describing how the following nine Essential Skills are used on-the-job:



Reading Text



Document Use



Numeracy



Writing



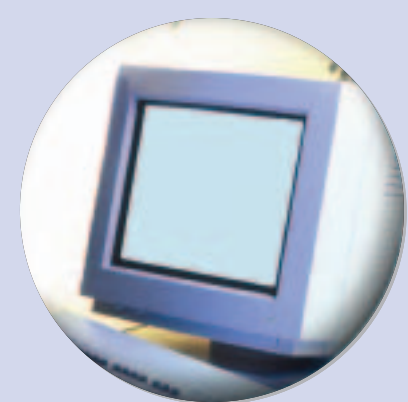
Oral Communication



Working with Others



Thinking Skills



Computer Use



Continuous Learning

Occupational Skills A	Interprets occupational documentation. 1	Interprets drawings and specifications. 1.01	Interprets codes and regulations. 1.02	Interprets material and equipment documentation. 1.03	Maintains work-related records. 1.04	
	Organizes work. 2	Prepares work site. 2.01	Performs lock-out and tagging procedures. 2.02	Estimates materials and supplies required for job. 2.03	Organizes materials and supplies. 2.04	
	Develops and maintains schedule. 2.05					
	Communicates in the workplace. 3	Communicates with other disciplines, co-workers, and clients. 3.01	Communicates with apprentices. 3.02			
	Uses and maintains tools and equipment. 4	Uses hand tools. 4.01	Uses power tools. 4.02	Uses powder-actuated tools. 4.03	Uses electrical measuring equipment. 4.04	
	Uses scaffolding and access equipment. 4.05	Uses rigging, hoisting, and lifting equipment. 4.06	Uses personal protection equipment. 4.07	Maintains tools and equipment. 4.08		
Distribution and Services B	Installs service entrance. 5	Installs supply services. 5.01	Installs metering systems. 5.02	Installs overcurrent protection. 5.03	Installs power distribution centre. 5.04	
	Installs temporary distribution. 5.05	Installs surge protection systems. 5.06	Installs power conditioning devices. 5.07	Installs uninterruptible power supply (UPS) systems. 5.08	Performs start-up and shut-down procedures. 5.09	
	Installs sub-panels, feeders, and transformers. 6	Installs sub-panels. 6.01	Installs feeders to sub-panels. 6.02	Installs low voltage transformers. 6.03		
	Installs bonding, grounding, and cathodic protection systems. 7	Installs bonding systems. 7.01	Installs grounding grids. 7.02	Installs ground fault systems. 7.03	Installs lightning arresters. 7.04	
	Installs power generation systems. 8	Installs generators and transfer switches. 8.01	Installs alternative power systems. 8.02			
	Installs high voltage systems. 9	Installs high voltage transformers. 9.01	Installs high voltage cables. 9.02	Terminates high voltage cables. 9.03	Tests high voltage systems. 9.04	
	Branch Circuit Wiring C	Installs raceway systems and cables. 10	Installs raceways. 10.01	Creates openings. 10.02	Installs seismic restraint systems. 10.03	Installs underground wiring. 10.04
		Installs boxes, cabinets, and fixtures. 10.05	Pulls conductors in raceways. 10.06			
		Installs power and lighting systems. 11	Installs luminaires. 11.01	Installs devices, switches, and outlets. 11.02	Installs lighting controls. 11.03	Installs light posts. 11.04
Installs heating and cooling systems. 12		Installs electric heating systems. 12.01	Connects cooling systems. 12.02	Installs heating/cooling control systems. 12.03		
Installs emergency lighting systems. 13		Installs exit lighting systems. 13.01	Installs battery-operated lighting. 13.02			
Motor and Control Systems D	Installs motor controls. 14	Installs starters. 14.01	Installs variable frequency drives (VFD). 14.02	Installs overload protection. 14.03	Installs manual motor controls. 14.04	
	Installs automatic motor controls. 14.05	Installs PLCs. 14.06				
	Installs motors. 15	Installs AC motors. 15.01	Installs DC motors. 15.02	Installs motor overcurrent protection. 15.03		
Extra Low Voltage Systems E	Installs signalling systems. 16	Installs fire alarm systems. 16.01	Installs nurse call systems. 16.02	Installs security systems. 16.03		
	Installs voice and data systems. 17	Installs telephone systems. 17.01	Installs data network systems. 17.02	Installs public address (PA) systems. 17.03	Installs community antenna television (CATV) systems. 17.04	
	Installs building automation systems. 17.05					
Upgrading, Maintenance, and Repair F	Upgrades electrical systems. 18	Evaluates existing electrical systems. 18.01	Replaces outdated systems with new technology. 18.02			
	Maintains electrical systems. 19	Troubleshoots electrical systems. 19.01	Replaces defective components. 19.02			
	Performs preventative maintenance. 20	Tests system operation. 20.01	Cleans and lubricates systems. 20.02	Establishes and maintains maintenance schedule. 20.03		