

## Industrial Electrician RSOS (2016) Subtask to Unit Comparison

RSOS Subtask		Manitoba Unit(s)
<b>Task A-1 – Performs safety-related functions.</b>		
A-1.01	Maintains safe work environment.	A2 Trade Safety Awareness
A-1.02	Uses personal protective equipment (PPE) and safety equipment.	A2 Trade Safety Awareness
A-1.03	Performs lock-out and tag-out procedures.	A2 Trade Safety Awareness
A-1.04	Identifies environmental conditions.	A2 Trade Safety Awareness
<b>Task A-2 – Uses tools and equipment.</b>		
A-2.01	Uses common and specialty tools and equipment.	A6 Residential Wiring Practices
A-2.02	Uses access equipment.	A2 Trade Safety Awareness
A-2.03	Uses rigging, hoisting and lifting equipment.	A2 Trade Safety Awareness ( <i>awareness only</i> )
<b>Task A-3 – Organizes work.</b>		
A-3.01	Interprets plans, drawings and specifications.	<i>In Context</i>
A-3.02	Identifies hazardous locations.	<i>In Context</i>
A-3.03	Organizes materials and supplies.	<i>In Context</i>
A-3.04	Plans project tasks and procedures.	<i>In Context</i>
A-3.05	Prepares worksite.	<i>In Context</i>
A-3.06	Finalizes required documentation.	<i>In Context</i>
<b>Task A-4 – Fabricates and installs support components.</b>		
A-4.01	Fabricates support structures.	A6 Residential Wiring Practices
A-4.02	Installs brackets, hangers and fasteners.	A6 Residential Wiring Practices
A-4.03	Installs seismic restraint systems.	A5 Residential Electrical Code A6 Residential Wiring Practices D1 Industrial Electrical Code II
<b>Task A-5 – Commissions and decommissions electrical systems.</b>		
A-5.01	Commissions systems.	<i>In Context</i>
A-5.02	Performs shutdown and startup procedures.	<i>In Context</i>
A-5.03	Decommissions systems.	<i>In Context</i>
<b>Task A-6 – Uses communication and mentoring techniques.</b>		
A-6.01	Uses communication techniques.	A3 Computer and Communication Skills
A-6.02	Uses mentoring techniques.	D8 Journeyman Trainer
<b>Task B-7 – Installs and maintains consumer/supply services and metering equipment.</b>		
B-7.01	Installs single-phase consumer/supply services and metering equipment.	A5 Residential Electrical Code
B-7.02	Maintains single-phase consumer/supply services and metering equipment.	A5 Residential Electrical Code
B-7.03	Installs three-phase consumer/supply services and metering equipment.	B2 Commercial Code Applications C1 Industrial Electrical Code I
B-7.04	Maintains three-phase consumer/supply services and metering equipment.	B2 Commercial Code Applications C1 Industrial Electrical Code I

<b>Task B-8 – Installs and maintains protection devices.</b>		
B-8.01	Installs overcurrent protection devices.	<i>In Context</i>
B-8.02	Maintains overcurrent protection devices.	<i>In Context</i>
B-8.03	Installs ground fault, arc fault and surge protection devices.	<i>In Context</i>
B-8.04	Maintains ground fault, arc fault and surge protection devices.	<i>In Context</i>
B-8.05	Installs under and over voltage protection devices.	<i>In Context</i>
B-8.06	Maintains under and over voltage protection devices.	<i>In Context</i>
<b>Task B-9 – Installs and maintains low voltage distribution systems.</b>		
B-9.01	Installs low voltage distribution equipment.	A5 Residential Electrical Code B2 Commercial Code Applications C1 Industrial Electrical Code I
B-9.02	Maintains low voltage distribution equipment.	A5 Residential Electrical Code B2 Commercial Code Applications C1 Industrial Electrical Code I
<b>Task B-10 – Installs and maintains power conditioning systems.</b>		
B-10.01	Installs power conditioning systems.	C3 Power Quality D7 Electrical Measuring Systems
B-10.02	Maintains power conditioning systems.	B2 Commercial Code Applications C3 Power Quality D7 Electrical Measuring Systems
<b>Task B-11 – Installs and maintains bonding, grounding, and ground faults detection systems.</b>		
B-11.01	Installs grounding systems.	A5 Residential Electrical Code B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
B-11.02	Maintains grounding systems.	A5 Residential Electrical Code B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
B-11.03	Installs bonding systems.	B1 Commercial Electrical Code C1 Industrial Electrical Code I
B-11.04	Maintains bonding systems.	B1 Commercial Electrical Code C1 Industrial Electrical Code I
B-11.05	Installs ground fault detection systems.	C3 Power Quality D7 Electrical Measuring Systems
B-11.06	Maintains ground fault detection systems.	C3 Power Quality D7 Electrical Measuring Systems
<b>Task B-12 – Installs and maintains power generating systems.</b>		
B-12.01	Installs alternating current (AC) generating systems.	C6 AC Machines and Controls
B-12.02	Maintains AC generating systems.	C6 AC Machines and Controls
B-12.03	Installs direct current (DC) generating systems.	B6 DC Machines and Controls
B-12.04	Maintains DC generating systems.	B6 DC Machines and Controls
<b>Task B-13 – Installs and maintains renewable energy generating and storage systems.</b>		
B-13.01	Installs renewable energy generating and storage systems.	B2 Commercial Code Applications C1 Industrial Electrical Code I D1 Industrial Electrical Code II

B-13.02	Maintains renewable energy generating and storage systems.	B2 Commercial Code Applications C1 Industrial Electrical Code I D1 Industrial Electrical Code II
<b>Task B-14 – Installs and maintains high voltage systems.</b>		
B-14.01	Installs high voltage systems.	C1 Industrial Electrical Code I D1 Industrial Electrical Code II
B-14.02	Maintains high voltage systems.	C1 Industrial Electrical Code I D5 Predictive and Preventive Maintenance II
<b>Task B-15 – Installs and maintains transformers.</b>		
B-15.01	Installs extra-low voltage transformers.	B2 Commercial Code Applications
B-15.02	Maintains extra-low voltage transformers.	B2 Commercial Code Applications
B-15.03	Installs low voltage single-phase transformers.	B2 Commercial Code Applications
B-15.04	Maintains low voltage single-phase transformers.	B2 Commercial Code Applications
B-15.05	Installs low voltage three-phase transformers.	C1 Industrial Electrical Code I C2 Three Phase Theory and Transformers
B-15.06	Maintains low voltage three-phase transformers.	C1 Industrial Electrical Code I C2 Three Phase Theory and Transformers
B-15.07	Installs high voltage transformers.	C1 Industrial Electrical Code I
B-15.08	Maintains high voltage transformers.	C1 Industrial Electrical Code I
<b>Task C-16 – Installs and maintains raceways, cables, conductors and enclosures.</b>		
C-16.01	Installs conductors and cables.	A5 Residential Electrical Code A6 Residential Wiring Practices B1 Commercial Electrical Code
C-16.02	Maintains conductors and cables.	A5 Residential Electrical Code A6 Residential Wiring Practices B1 Commercial Electrical Code
C-16.03	Installs conduit, tubing and fittings.	A5 Residential Electrical Code A6 Residential Wiring Practices B1 Commercial Electrical Code B2 Commercial Code Applications
C-16.04	Installs raceways.	A5 Residential Electrical Code B1 Commercial Electrical Code
C-16.05	Installs boxes and enclosures.	A5 Residential Electrical Code B1 Commercial Electrical Code
C-16.06	Maintains conduit, tubing, fittings, raceways, boxes and enclosures.	A5 Residential Electrical Code B1 Commercial Electrical Code
<b>Task C-17 – Installs and maintains branch circuitry and devices.</b>		
C-17.01	Installs luminaires.	A5 Residential Electrical Code B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
C-17.02	Maintains luminaires.	A6 Residential Wiring Practices B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
C-17.03	Installs wiring devices.	A5 Residential Electrical Code B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II

C-17.04	Maintains wiring devices.	A6 Residential Wiring Practices B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
<b>Task C-18 – Installs and maintains heating, ventilation and air-conditioning (HVAC) electrical components.</b>		
C-18.01	Connects power to HVAC systems and associated equipment.	B4 Motor Controls C5 Industrial Control Systems I D2 Industrial Control Systems II
C-18.02	Installs HVAC controls.	B4 Motor Controls C5 Industrial Control Systems I D2 Industrial Control Systems II
C-18.03	Maintains HVAC electrical components.	B4 Motor Controls C5 Industrial Control Systems I D2 Industrial Control Systems II
<b>Task C-19 – Installs and maintains electric heating systems and controls.</b>		
C-19.01	Installs electric heating systems and controls.	A5 Residential Electrical Code B1 Commercial Electrical Code C1 Industrial Electrical Code I C5 Industrial Control Systems I D1 Industrial Electrical Code II D2 Industrial Control Systems II
C-19.02	Maintains electric heating systems and controls.	B2 Commercial Code Applications C1 Industrial Electrical Code I C5 Industrial Control Systems I D1 Industrial Electrical Code II D2 Industrial Control Systems II
<b>Task C-20 – Installs and maintains exit and emergency lighting systems.</b>		
C-20.01	Installs exit and emergency lighting systems.	B2 Commercial Code Applications
C-20.02	Maintains exit and emergency lighting systems.	B2 Commercial Code Applications
<b>Task C-21 – Installs and maintains cathodic protection systems.</b>		
C-21.01	Installs cathodic protection systems.	B2 Commercial Code Applications
C-21.02	Maintains cathodic protection systems.	B2 Commercial Code Applications
<b>Task D-22 – Installs and maintains motor starters and control devices.</b>		
D-22.01	Installs motor starters.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II D2 Industrial Control Systems II
D-22.02	Maintains motor starters.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II D2 Industrial Control Systems II
D-22.03	Installs motor control devices.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II D2 Industrial Control Systems II
D-22.04	Maintains motor control devices.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II D2 Industrial Control Systems II

<b>Task D-23 – Installs and maintains drives.</b>		
D-23.01	Installs AC drives.	C4 Electronic Concepts II D4 AC and DC Variable Speed Motor Drives
D-23.02	Maintains AC drives.	C4 Electronic Concepts II D4 AC and DC Variable Speed Motor Drives
D-23.03	Installs DC drives.	C4 Electronic Concepts II D4 AC and DC Variable Speed Motor Drives
D-23.04	Maintains DC drives.	C4 Electronic Concepts II D4 AC and DC Variable Speed Motor Drives
<b>Task D-24 – Installs and maintains non-rotating equipment and associated controls.</b>		
D-24.01	Installs non-rotating equipment and associated controls.	D5 Predictive and Preventive Maintenance II
D-24.02	Maintains non-rotating equipment and associated controls.	D5 Predictive and Preventive Maintenance II
<b>Task D-25 – Installs and maintains motors.</b>		
D-25.01	Installs single-phase motors.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
D-25.02	Maintains single-phase motors.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
D-25.03	Installs three-phase motors.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
D-25.04	Maintains three-phase motors.	B1 Commercial Electrical Code C1 Industrial Electrical Code I D1 Industrial Electrical Code II
D-25.05	Installs DC motors.	B6 DC Machines and Controls C6 AC Machines and Controls D9 Pre-IP Exam Review
D-25.06	Maintains DC motors.	B6 DC Machines and Controls C6 AC Machines and Controls D9 Pre-IP Exam Review
<b>Task E-26 – Installs and maintains signaling systems.</b>		
E-26.01	Installs fire alarm systems.	D2 Industrial Control Systems II
E-26.02	Maintains fire alarm systems.	D2 Industrial Control Systems II
E-26.03	Installs security and surveillance systems.	D2 Industrial Control Systems II
E-26.04	Maintains security and surveillance systems.	D2 Industrial Control Systems II
<b>Task E-27 – Installs and maintains communication systems.</b>		
E-27.01	Installs communication systems.	A6 Residential Wiring Practices D2 Industrial Control Systems II
E-27.02	Maintains communication systems.	D2 Industrial Control Systems II
<b>Task F-28 – Installs and maintains building automation systems.</b>		
F-28.01	Installs building automation systems.	D2 Industrial Control Systems II
F-28.02	Maintains building automation systems.	D2 Industrial Control Systems II
<b>Task F-29 – Installs and maintains input/output (I/O) devices.</b>		
F-29.01	Installs discrete input/output (I/O) devices.	C5 Industrial Control Systems I D2 Industrial Control Systems II
F-29.02	Maintains discrete input/output (I/O) devices.	C5 Industrial Control Systems I D2 Industrial Control Systems II
F-29.03	Installs analog input/output (I/O) devices.	C5 Industrial Control Systems I D2 Industrial Control Systems II

F-29.04	Maintains analog input/output (I/O) devices.	C5 Industrial Control Systems I D2 Industrial Control Systems II
<b>Task F-30 – Installs, programs and maintains automated control systems.</b>		
F-30.01	Installs automated control systems.	D2 Industrial Control Systems II D7 Electrical Measuring Systems
F-30.02	Maintains automated control systems.	D2 Industrial Control Systems II D7 Electrical Measuring Systems
F-30.03	Programs automated control systems.	D2 Industrial Control Systems II D7 Electrical Measuring Systems
F-30.04	Optimizes system performance.	D2 Industrial Control Systems II D7 Electrical Measuring Systems
<b>Task F-31 – Installs and maintains pneumatic and hydraulic control systems.</b>		
F-31.01	Installs pneumatic control systems.	D6 Hydraulic and Pneumatic Power Control Systems
F-31.02	Maintains pneumatic control systems.	D6 Hydraulic and Pneumatic Power Control Systems
F-31.03	Installs hydraulic control systems.	D6 Hydraulic and Pneumatic Power Control Systems
F-31.04	Maintains hydraulic control systems.	D6 Hydraulic and Pneumatic Power Control Systems



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